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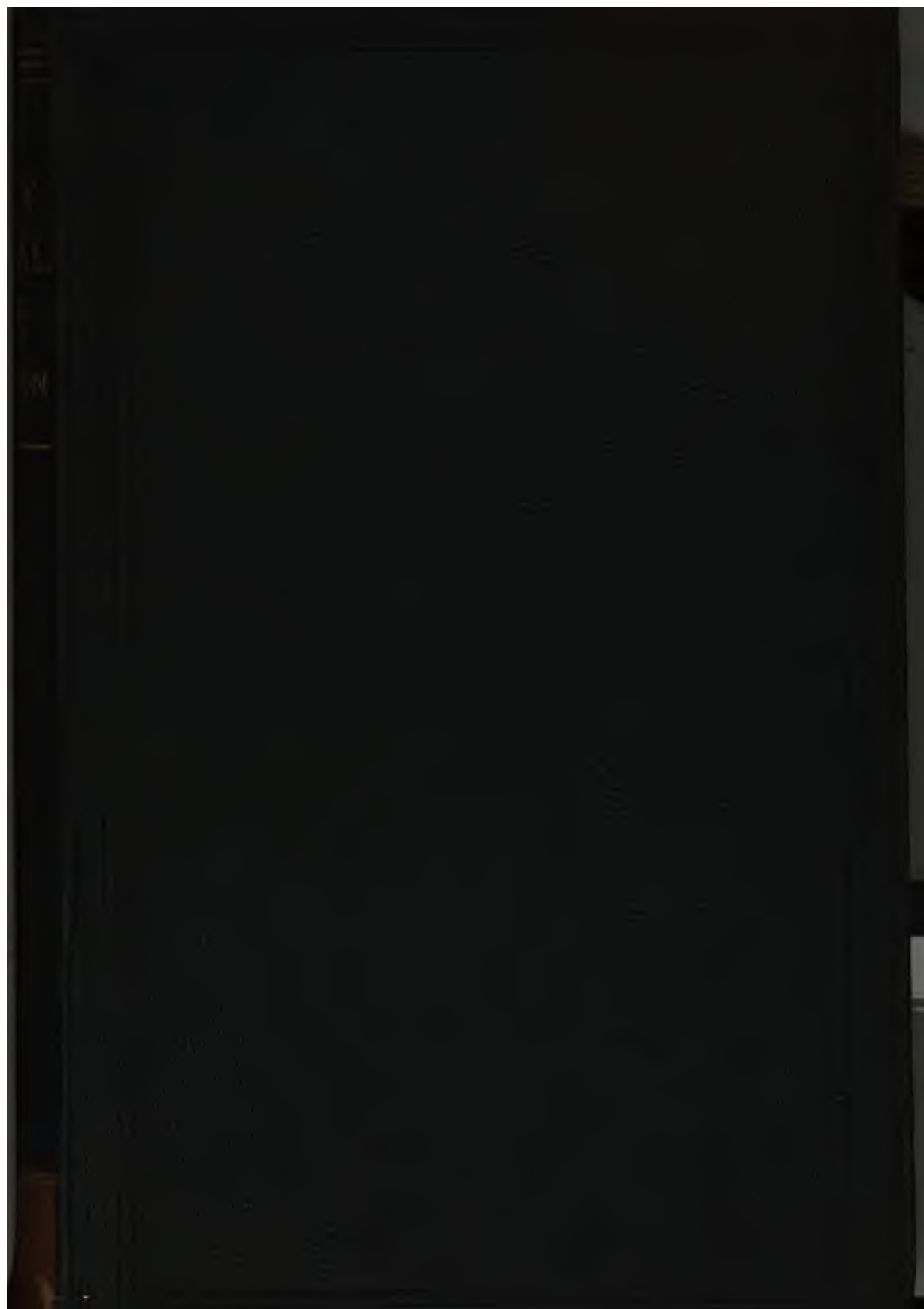
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THE
FAMILY MEDICAL GUIDE ;

WITH

PLAIN DIRECTIONS FOR THE TREATMENT OF
EVERY CASE,

AND A

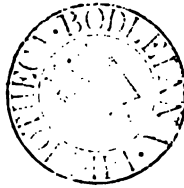
LIST OF THE MEDICINES REQUIRED FOR ANY
HOUSEHOLD.

BY

GEORGE FULLERTON,

C.M. AND M.D., EDIN.,

FORMERLY PHYSICIAN TO THE SYDNEY INFIRMARY AND BENEVOLENT ASYLUM



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PREFACE.

BEING an invalid, unable to practise my profession, and unwilling to be enrolled with those whom the ancient poet satirises as created only to consume the fruits of the earth, I have lately occupied my time by committing to paper a few observations respecting disease, and some of its remedies, as affecting the human race.

We know that in household matters it is more profitable to employ those accustomed to cut silk, or coarser fabric, than to attempt to fashion our own garments; and the same rule holds in the management of our health. Because, in adapting the proper remedy to each case, doctors, who have studied the anatomy of the human frame, and the diseases to which it is subject, acquire a facility in discriminating that can be obtained only by an educated eye, and the influence of practice.

My experience in Australia for thirty years makes me aware, however, that in this portion of the British Empire there are localities where a doctor can seldom be got, a patient being obliged to send, perhaps, a hundred miles to find one. It is certain, also, that there do occur little ills for which many persons, even in cities, do not like to consult a doctor; and for such emergencies and trifles, it seems to me that a few plain directions might assist to avert or alleviate some of the sufferings of the unfortunate.

It being my object to do a service to the afflicted, rather than to appear learned, I shall not confine myself to any

systematic arrangement of diseases ; but notice each as it occurs most frequently to our observation. And as I write chiefly for those who may be distant from an apothecary, I shall limit my remedies to a few medicines, familiar to every one, and easily kept or carried ; being convinced that a multitude of prescriptions, although they may increase the profits of the druggist, must only perplex the uninitiated, and cannot serve the public.

To spare space I have refrained from quoting the opinions of many high authorities who support the practice which I recommend ; and having studied at three universities, Dublin, Glasgow, and Edinburgh ; having read a good deal, and practised generally, I have condensed my gleanings and experience of forty years into one volume, with the hope that it may be useful to some of my fellow-creatures.

My effort, I am aware, must come short of what is required ; but if I can accomplish a little good, I shall consider my time well spent. And as I do not aspire to instruct the profession, who are equally informed as myself, I hope the title of Medical Guide will not be misinterpreted.

BRISBANE, QUEENSLAND.

15TH *February*, 1870.

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THE

FAMILY MEDICAL GUIDE.

PART I.

THE SKIN AND ITS FUNCTIONS.

THE external covering of the human frame being most under the influence of personal care and attention, we shall give it the first place in our notice.

It consists of the cuticle or scarf skin, the deeper seated true skin, and an intermediate network, supposed to give complexion to each individual, fair or dark, blonde or brunette.

The importance of the skin in the animal economy is evinced by the fact, that when one-eighth of the true skin has been destroyed by burns, such injury has generally proved fatal.

This marked influence of the skin on the health and preservation of the constitution is owing to the important functions which this external covering performs. It is furnished with a multitude of small pores or apertures, called glands; the sebaceous or oil glands, for lubricating the surface; and also the perspiratory or sweat glands, through which, by perspiration, sometimes insensible, and occasionally profuse, much is evacuated, that, if retained, would be injurious to health.

In addition to its being thus the most extensive avenue for the exit of effete and deleterious matter, the skin, by these same pores, can absorb many medicinal applications for the relief of pain and cure of disease; and may also imbibe poisons that are destructive to the constitution.

The skin gives protection, likewise, to a multitude of blood-

vessels, and to the extremities of the numerous nerves which terminate in it, rendering it one of the most sensitive parts of the body ; while it gives support and form to the soft parts that lie underneath it.

The amount of perspiration given off by the skin varies in different individuals, and must be considerably influenced by the quantity of fluids taken by each ; but any sudden stoppage, even to the insensible perspiration, can scarcely occur with impunity. Forgetful of this, many persons fail to pay proper attention to the action of the skin ; and do not seem sufficiently aware of the evil effects that often result from obstruction of the perspiration.

To cause this obstruction, it is not necessary that the entire surface of the body be exposed to a low temperature. On the contrary, so great is the sympathetic action of the skin, that cold applied by damp to the feet or hands, or by a current of air directed on the head or neck, will often give a sudden check to the perspiration of the entire body, and be followed by the usual consequences ; a determination of blood to some internal part, and consequent congestion or inflammation of the throat, pleura, lungs, stomach, or bowels.

On account of this sympathy our change of dress should never be hasty, nor partial. The entire person should be equally protected from cold ; and chills by exposure to currents of air, commonly called draughts, should always be carefully guarded against, particularly if the system be relaxed by fatigue or perspiration.

In the skin, as in other parts of the body, a constant process of decay and renewal is continually going on ; and this is evidenced by an exfoliation of the cuticle, which, when it is very abundant, appears on the body or hands, as a white scale ; and on the head forms dandriff.

The frequent removal of this deciduous cuticle conduces very much to the healthy action of the skin ; and for this purpose ablutions with water are sufficient for children, while the cuticle is thin ; but for adults something more detergent is required, and soap should be added, as the alkali in the soap has the power of dissolving the cuticle, and thereby removing it. Every bath-room should, therefore, be provided with soap ; and proper attention to cleanliness requires bathers to use it.

The preference shown for scented soaps is not judicious, because all essential oils have a drying tendency, and counteract the softening property of the alkali in the soap. Gentlemen who shave the

beard soon discover that scented soap hardens the hair, and takes the edge off a razor. Good white soap is always preferable to any kind of scented soap for removing the superfluous cuticle, and thereby beautifying the skin.

To remove dandriff of the head, it is better to use the alkali separately ; and for this purpose one ounce of common washing soda should be dissolved in a pint of water, of which solution, kept in a bottle for the purpose, a tablespoonful should be rubbed into the roots of the hair every evening, and then washed off with tepid water, until the dandriff disappears. To prevent a relapse or return of the dandriff, this application should be repeated once a week ; and the food and drink should be altered, as this affection always indicates an injured stomach.

In certain constitutions, in which the free perspiration seems limited to a particular part of the body—in some to the feet, with others to the armpits or elsewhere—the sweat glands of the part produce an offensive odour, which the greatest attention to cleanliness fails to prevent.

If the armpits be the source, the unpleasant effluvia may be controlled by shaving off the hairs once a week, together with frequent ablutions with soap and water.

The trouble of this remedy is, however, too great to be relished by many ; and the next best application is Condyl's disinfecting fluid, diluted, and applied occasionally to the hairs in the armpits, or the toepart of each stocking. This is greatly preferable to the overcoming scents often used for such purposes.

In some depraved states of the constitution, the effluvia from the entire person is offensive. It occurred to me to see two such cases, one in hospital, and the other in private practice. The patients had no fever, and complained merely of lassitude and inability to exercise, while their appetite was good, as were also the other natural functions ; but the odour from the back of the hand, arm, or other part of the body, was perfectly foetid. Frequent baths, both hot and cold, and medicine with regulated food and drink, had no good effect in these cases ; nor have physiologists discovered any satisfactory cause to account for this anomalous malady. Some have attributed it to a depraved action of the absorbents taking up such matter as should be carried off by the bowels ; but this opinion is founded merely on conjecture. It shows the powers of the Great Creator, and should make others thankful that they are not similarly constituted.

DISEASES OF THE SKIN.

HYPERTROPHY OF THE CUTICLE.

This is an unnatural growth of the cuticle, which causes the legs to swell, so as to overhang the feet, leaving the toes uncovered as a margin. It is frequently met with in Arabia, and is called the Elephant's leg. And a similar disease of the cuticle affects the face of persons in Lisbon and in Greece; but neither is often seen among British subjects. With us hypertrophy of the cuticle assumes a milder form, producing warts, corns, and ragnails.

WARTS

are protuberances on the skin, consisting of condensed layers of cuticle. They form chiefly on the fingers and hands, but they are found also on the head and other parts. There is a popular idea that they are infectious, greatly influenced by the imagination, and capable of being cured by charms, such as the last drop of a pig's blood smeared upon the part. But it is more reasonable to consider that they are produced by sympathy of the skin with the stomach, as they form principally on children, whose digestive powers have been overtaxed; and that their hasty removal at any time is owing to the magic influence of an improved state of the digestive organs.

Treatment.—When small they are easily removed by rubbing the warts at night with a piece of bluestone (sulphate of copper) moistened with water. This gives no pain, and the discoloration can be washed off next morning, taking care to continue the application of the bluestone every night until the warts disappear; attention being meanwhile paid to the state of the stomach and bowels.

If the warts be elevated and have a small base, they should be cut off with a pair of scissors, as close to the skin as possible, and when the bleeding ceases, the wound should be touched with bluestone (sulphate of copper), and then covered with an oiled rag till it heals. Those who dread the pain of having warts cut off can remove them by applying a drop or two of diluted vitriol (sulphuric acid) or strong vinegar to each wart night and morning till it falls off.

When warts appear on the faces of elderly persons they should be touched with bluestone or nitrate of silver (caustic) to prevent their

growth, as they often assume a cancerous action ; and persons so threatened should discard alcoholic stimulants, and support the constitution with mild nourishing diet. If the appetite be deficient, in place of stimulants they should take a tonic ; quinine in small doses, half a grain after breakfast and dinner ; but if this cause headache, a wineglassful of infusion of chiretta or quassia should be substituted for it, twice a day, after food.

CORNS.

These are also an accumulation of cuticle, indurated by the pressure of tight boots or shoes, and by this pressure forced down into the true skin, which being very sensitive, soon resents the injury, and proclaims it by acute pain.

There are two kinds of corns, the hard and the soft.

HARD CORNS

form on the toes, the soles of the feet, the hands, and on the tops of the fingers of those persons who play on stringed instruments. And some corns are much more painful than others, owing to their proximity to a joint, or to some of the layers of cuticle being forced more deeply into the true skin. These deep layers of cuticle have erroneously been called roots, and when removed have often been exhibited as a trophy by charlatans.

Treatment.—The corn should be well softened by immersing the foot in tepid water, with plenty of soap, for twenty minutes or half an hour ; but hot water is not suitable, because it attracts too much blood to the part. When properly softened, the corn should be pared with a round-pointed penknife, tolerably sharp, and as much of the indurated cuticle should be taken off as can be removed without shedding blood, which must be carefully avoided, because wounding the true skin makes the corn more painful, and increases the difficulty of removing it.

The corn, when pared, must be protected from pressure in future ; and, nature being thus relieved, the growth of the true skin underneath the corn will soon raise up the deep-seated layers of cuticle, and make them easily removed by a future operation. Nor should we expect to remove a corn at once. We must be satisfied to persevere at intervals, until the last layer of cuticle can be safely dislodged.

To prevent pressure on corns, boots and shoes should be wide at the toes, and stockings should be made to fit the foot. Many who

are very careful to have a closely-fitting boot, pay no attention to their stockings, being forgetful that a creased or darned stocking is a sure means of producing corns.

If leather boots be worn, a number of free incisions should be made in the part opposite the corn; but for those who are so afflicted, buckskin, or the material called *pannus corium*, is preferable to leather. Patent leather is particularly objectionable, because it is unyielding, and, being impervious to air, keeps the feet too hot in summer and cold in winter. In some cases a ring of amadou plaster, with a hole punched in its centre, when worn over the corn, seems useful; but in many instances it aggravates the evil, by making pressure on the surrounding parts, and thus inflaming a larger surface.

Corns on the sole of the foot, when pared as directed above, should be protected from pressure by wearing a felt sole inside the boot, with a hole opposite the corn, until it can be perfectly removed.

SOFT CORNS.

These form between the toes, and are kept soft by the perspiration. They are caused by similar pressure of tight boots or shoes. And they occur to those who, when washing their feet, neglect to remove the deciduous cuticle that accumulates between the toes, and should always be carefully rubbed off.

For the removal of soft corns, the same careful paring must be adopted, as advised for hard corns; and particular attention should be paid to the covering of the feet. Stockings folded about the toes must be discarded; and the material for boots should be very light, cloth being preferable to every other texture.

RAGNAIL.

This form of hypertrophy of the cuticle, affecting the fingers and toes, is often very annoying. The cuticle grows up under and adheres to the nails, at one or both angles, forming what is called ragnail of the finger. From the angles or sides, the cuticle extends often to the nail, being reflected under it, round to the point of the finger; and causing some persons to get an unmerited character for want of attention to cleanliness. Because dust or other matter is easily removed from the polished, horny substance of the nail; but when this is coated with a layer of cuticle, reflected under it, dust will accumulate and lodge, in despite of care.

Some persons who have short, thick fingers, and whose stomachs have been injured by indigestible food, are so much annoyed with this redundant growth of the cuticle, that they are obliged to keep their nails cut down to the quick. The better expedient is to remove the superfluous growth of cuticle from the sides of the nail, with the round blade of a penknife, twice a week ; which is generally sufficient to control it. But in some cases the hypertrophy is so great, and the skin so elevated at the sides of the fingers, that the ragnail becomes irritated by pressure, and suppuration ensues. This is sometimes called whitlow, but to this disease it has no affinity.

Treatment.—To cure a suppurating ragnail, it is necessary to break a piece of bluestone, so as to get a sharp point to dip down at the side of the nail to destroy the false growth. In the course of three or four days afterwards, the part that has been rendered insensible should be removed with the round point of a penknife, and the bluestone reapplied again and again, until the irritation and ragnail disappear. If much inflammation supervene, a poultice should be applied after the bluestone.

RAGNAIL OF THE GREAT TOE.

This is popularly called a growing down of the nail, while it is an elevation of the cuticle over the nail, similar to what occurs in the fingers ; the inflammation being increased by the pressure of boots or shoes.

Treatment.—By cutting the nail and scraping it very thin, especially at the sides, that it may not give much resistance to the soft parts, when pressed against it ; by abstaining from walking, and keeping the feet elevated, and covered with a light slipper only, and by applying bluestone as directed above for the ragnail of the finger, this affliction can generally be cured in about a fortnight. And by constant attention in scraping the nail thin afterwards and removing the redundant cuticle, once a week at least, comfort may be obtained. But every such operation must be bloodless ; for if the true skin be wounded irritation is produced, and the suffering is increased.

To effect a permanent cure of this diseased state of the great toe, one of two surgical operations is necessary ; either to extirpate the nail by pulling it off with strong forceps, or else to cut off the enlarged growth of cuticle at the side of the nail.

The latter operation is preferable ; and if the part be benumbed by the application of ice, or by a spray of ether thrown upon it, the pain is trifling. The incision should be made freely, so as to include

the ragnail and remove all the hypertrophied skin along with it. This being done, the wound should be dressed with a folded rag, dipped in water and covered with oiled silk, to prevent evaporation ; or with bread and water poultice for three days ; after which it should be dressed with salve, made with two drachms of iodide of lead to an ounce of lard, fresh or saved without salt. After the sixth day the wound should be touched occasionally with bluestone, to make it heal with as little elevation as possible ; but the salve must be continued till the wound is perfectly healed.

This operation, in my experience, was more successful than that of extirpating the nail, which, when grown again, is still liable to irritate the hypertrophied skin.

DISEASED NAILS.

Children suffer frequently from inflammation attacking the roots of the nails, which assume a very irritable appearance, and cause great pain to the little sufferers ; the loss of the nail being generally the result. This affection is commonly ascribed to some injury or contusion, and occasionally does arise from such cause ; but I have frequently found it associated with a disordered state of the digestive organs, and evidently attributable to gross and improper food.

Treatment.—As a local application, salve made of one drachm of iodide of lead to an ounce of fresh lard, spread on soft cotton, and folded around the finger, soothes the pain and checks the inflammation ; but the hand should be supported by a handkerchief around the child's neck, and the stomach and bowels should be attended to. If the child's bowels be relaxed, it should get one drachm of precipitated chalk, with a drachm of tincture of catechu, in two table-spoonfuls of water ; of which a teaspoonful should be given with a little sugar in it, every six or eight hours, as required to check the *tax*. If, on the contrary, the bowels are constipated, the child should get one grain of aloes, with five grains of Epsom salts, in a little syrup or treacle every night, till the bowels act naturally.

If the appetite be deficient and the countenance pale, iron is indicated, and in such cases is always serviceable. Five drops of the solution of the perchloride of iron should be given in a wineglassful of sweet milk, once a day ; or a teaspoonful of mixture of the carbonate of iron, one ounce in a pound of treacle, given also once a day.

BUNIONS.

These are commonly taken to be a species of corn, but they are of

very different origin. They are formed by inflammation of a bursa, which is a little bag with fluid in it, placed by nature as a cushion to prevent friction, where a tendon passes over bone.

Such tumours are often seen on the back of the hand, below the wrist ; and they can be cured by any means that removes the fluid, and causes the bursa to be obliterated.

Treatment.—Striking the tumour with a round rule or the back of a book, so as to cause it to burst, is a plan sometimes adopted ; but this is a rude operation, and does not always succeed. A seton applied by a double thread of darning cotton, passed by a needle through the longest diameter of the tumour, and allowed to remain in, the ends being tied, for three or four days, until suppuration is fairly established, is the most certain method of treating an enlarged bursa. When the seton has caused suppuration, it should be removed, and the matter should be well pressed out of the tumour ; then a round, oblong pledget of folded cotton should be placed across the centre of the bursa, and kept firmly applied by a bandage around the hand, so as to make the inflamed edges of the bursa unite. This obliterates the bursa, and prevents a return of the tumour. To keep the hand from swelling it should, meanwhile, be supported in a sling.

BUNIONS ON THE GREAT TOE

might be cured, in the early stage, by the same means ; but they are generally neglected till it is too late ; nor have I ever been consulted until the neighbouring joint was so much inflamed and injured, that to relieve pain was all that could be accomplished.

Treatment.—Much can be done to abate inflammation and give relief by applying a couple of leeches around the inflamed part, soothing it afterwards with a decoction of poppyheads for a day or two, and then dressing it with iodide of lead salve, two drachms to the ounce of lard ; the foot being kept well elevated during the treatment.

A permanent cure, in old cases, could be obtained only by amputating the toe ; but, as every bodily ill is influenced by our food and drink, constant attention to the ingesta does greatly alleviate suffering. Such patients should confine themselves to light, easily-digested food, avoiding made dishes, pastry, salted meats, and alcoholic stimulants. Thin boots or shoes should be made of cloth, as the heat and pressure of leather are quite intolerable.

ERUPTIONS ON THE SKIN.

FOR our practical purpose, these may be divided into four classes : those which commence with pimples, or little elevations on the skin ; secondly, those beginning with vesicles, or little blisters ; thirdly, those commencing with pustules, forming in the cellular substance under the skin, and elevating it ; and fourthly, those characterised by scales on the surface.

The first class, or pimples, includes all the family of rashes, which are seldom dangerous, excepting those which usher in measles or scarlatina.

PIMPLES

are the first form of skin disease that human beings are subject to. Early in life the skin gives evidence of an injured stomach ; and the infant of a few days old, having been gorged with too much breast milk, or more likely with panado or gruel, perfectly unfit for it, gets a rash called by nurses the "red gum."

Treatment.—This eruption inflicts on the little innocent the usual dose of castor oil, and requires more consideration in future in feeding the infant. With such care the eruption soon passes off ; but under mismanagement, and a continuation of the system of cramming or overfeeding, the rash may spread and become very troublesome. The rash which forms in the groins of children, where the skin overlaps, and is called by nurses "scalding," is generally attributable to want of cleanliness, and is easily cured by the application of a little dusting powder, if the part be kept perfectly dry.

ROSE RASH.

This eruption appears on children about the period of teething. It forms red clusters on different parts of the body, and indicates a deranged state of the stomach and bowels. It is seen frequently on young women about the period of puberty, particularly in hot weather, and is sometimes mistaken for measles ; from which it is distinguished by the absence of the weak eyes, tendency to cough, and the fever, which characterize measles.

Treatment.—Children affected with rose rash should get one grain of powdered aloes with four grains of Epsom salts in a little syrup or treacle, every second day till the rash disappears. If the child be suckled, it should have the breast only ; and if brought up by hand,

it should get nothing but equal parts of milk and water, given in moderate quantity, and only at regular periods.

Adults suffering from rose rash must be treated according to the cause of the attack. If the tongue is coated, showing that the rash proceeds from indigestion, the patient should get twenty grains of ipecacuan mixed in a cup of water, half to be taken at first, and a tablespoonful of the remainder every ten minutes, until vomiting is produced, which should be encouraged by drinking freely of tepid water, so as to empty the stomach thoroughly. If the skin be dry, indicating that the perspiration is suppressed, a warm plunge bath from 90° to 100° Fahr. for twenty minutes or half an hour should be given after the emetic; and the patient, being well dried, should go to bed, and take two grains of aloes with ten grains of Epsom salts, in syrup or treacle, to act on the bowels. This aperient should be repeated every night until the rash is removed, the food being farinaceous.

NETTLE RASH.

This is the next in frequency, and attacks at any period of life. It assumes the form of wheals, or elevated blotches, as if the person had been stung with nettles, from which likeness this eruption has been named.

The affected part may be white or red, having a tingling or burning sensation, accompanied always with great itching.

This rash is always produced by one of two causes—by suppression of the insensible perspiration from a chill; or by eating something the stomach cannot digest. Shrimps, oysters, and other shellfish, mushrooms, nuts, bitter almonds, and other articles of food, produce this rash, occasionally, and not always, even in the same constitution.

Treatment.—This should be similar to that advised above for the management of rose rash; but an additional remedy is required for the intense itching which always accompanies this rash. The discomfort caused by this rash is immediately controlled by rubbing the parts, night and morning, or every eight hours, with a few drops of liquid diluted ammonia, hartshorn, or with a solution of sal ammoniac, the muriate of ammonia, two drachms of this being dissolved in two tablespoonfuls of water. The fluid ammonia, diluted, is more efficient, and, if sufficiently strong, a little rubbed on gently with the finger, or with a feather, say every eight hours, never fails to relieve the intolerable itching, and to cure the rash after a few applications.

I am not aware that other practitioners have used ammonia for

this purpose ; but its influence as an alkali in correcting acidity, and as a stimulant to excite a healthy action, induced me to try it some twenty years ago ; and much experience has confirmed my confidence in it as a sovereign remedy for all itchings, except that of the eye, which it would inflame ; and as a most efficient application for all cutaneous eruptions, accompanied with itching. The ammonia sold in the shops is largely diluted with water ; and being often exposed to the air, becomes vapid and inert as a local stimulant. But the strong fluid ammonia, if kept in a stoppered bottle, is always efficient. Nor need any one be afraid to apply the strong ammonia, if the skin be not broken ; for if the part be kept uncovered for a few minutes, to allow it to evaporate, it leaves no mark. On the contrary, if we wished to form a speedy blister, it is only necessary to cover the surface, wet with strong ammonia, for a few minutes, with oiled cloth, and a blister is certain to be produced. And it is well to state that when applying ammonia the vapour should not be inhaled, because it might suffocate by causing spasm of the glottis, and inflammation of the air tube.

To prevent itching, the ammonia must be strong enough to smart a little ; but this feeling is very transient, ceasing in five, or at most ten minutes ; while, compared with the itching, it is pleasurable.

If the skin be abraded, the strong ammonia would be too severe, and should be diluted with two, three, or more parts of water, to suit the patient ; as some persons bear stimulants much better than others. But it is necessary to recollect that if the application be weak it must be oftener repeated.

Nettle rash, in some cases of chronic derangement of stomach, proves very persistent, and apt to recur at short intervals ; so that one attack is scarcely over when another appears. Such patients should abstain from alcoholic stimulants, and take tonics ; as half a grain of quinine after breakfast and dinner, or ten drops of the solution of perchloride of iron in a wine-glass of water after food twice a day, the bowels being moderated by two grains of aloes and ten grains of Epsom salts in a little syrup or treacle every night, as required.

PRICKLY HEAT, OR SWEAT RASH.

This rash may attack the young or the aged, and seems to be caused by acidity of the perspiration, irritating the pores of the skin. It is characterised by small, hard, red elevations on different parts of the body, but most frequently on the chest and arms.

This rash is accompanied with a tingling sensation and itching, so intense as to banish sleep. In Australia, in the summer season, it is always very prevalent, with children who are allowed to eat too much animal food, and adults who indulge in the use of alcoholic stimulants.

Treatment.—A little fluid diluted ammonia rubbed lightly over the itching parts night and morning never fails to control the itching and consequent scratching, by which the rash is irritated and increased. In the absence of fluid ammonia, we may substitute a solution of muriate of ammonia, sal ammoniac, two drachms to two tablespoonfuls of water; of which a teaspoonful applied night and morning has also a good effect, but is not so efficient.

Children suffering from prickly heat should be limited to farinaceous food, as good bread, rice, sago, or arrowroot boiled in water and eaten with milk. If thirsty, their drink should be a little cream of tartar (the tartrate of potash), in water, made palatable with a little sugar.

Adults should eat sparingly of animal food, avoid pastry and made dishes, as also alcoholic stimulants, taking in preference some light bitter, as infusion of camomile, chiretta, or quassia, after breakfast and dinner. A shower bath morning and evening has a very salutary effect.

ITCHING, OR PRURIGO.

This is a very troublesome form of pimples or rash. It may attack at any time from puberty up to old age, and as the skin is seldom discoloured, until made so by scratching, and the pimples very little elevated, the itching is sometimes attributed to the presence of vermin; but this doubt is easily resolved by ocular inspection.

This rash differs from the one last noticed, because it prevails generally in cold weather; still it is greatly aggravated by heat, and seems to acquire increased vigour under the blankets, so that persons suffering from it can seldom enjoy sleep. The tendency to scratch the part affected is always ungovernable, and, when indulged, realises the old adage, that the more one scratches the more does he itch.

Treatment.—As this affection always arises from too much acidity in the blood, caused by obstruction to the insensible perspiration, or by the kidneys failing to do their duty, or by food taken into the stomach that was not fit for it, nor capable of being reduced into healthy chyme, we must endeavour to find out the cause, and remove

it, by correcting what is in error, and improving the general health.

If perspiration is deficient, a hot bath at 100° Fahr. twice or thrice a week at bedtime is indicated. If the kidneys do not act sufficiently, twenty grains of nitre should be taken in a wineglassful of water, after food, thrice a day. And if the tongue is coated, twenty grains of ipecacuan should be given to unload the stomach by vomiting; after which the food should be altered, alcoholic stimulants should be abstained from, the digestive powers should be increased by half a grain of quinine, or a wineglassful of infusion of quassia or gentian, taken after breakfast and dinner; while the bowels are regulated by two grains of aloes and ten grains of Epsom salts taken in syrup or treacle at night, if required.

As a local application to control the itching, the fluid ammonia should be applied to the parts, night and morning.

THE OLD MAN'S ITCH

is the most severe form of this rash. It affects the legs chiefly, and causes itching so insufferable as to deprive the person of sleep; keeping up such a constant desire to scratch, that the surface is soon abraded, and covered with tedious, obstinate ulcers.

In this, as in other afflictions, the rule is, I believe, invariable that the older the disease the more tedious and difficult will be the recovery, because habit establishes an influence opposed to the healing art.

Still, even in chronic cases much can be done by regulating the diet and drink, as advised above, and by giving constant rest to the affected limb. When the legs of old persons become ulcerated, the sores should be bathed night and morning with a saturated solution (as much as water will dissolve) of common washing soda, and then dressed with iodide of lead salve, made with two drachms of the iodide to an ounce of fresh rendered suet; this salve being spread on thick calico or linen, and renewed as the plaster wears off. If the solution of washing soda is not sufficient to control the itching, a solution of sal ammoniac, two drachms to the ounce of water, should be substituted for the soda, and the leg dressed as before with the iodide of lead salve; care being taken to keep the foot elevated as high as the body, and never to allow it to hang down, or be used under any pretext. But should these stimulants fail to control the itching and cure the ulceration, then the fluid ammonia should be applied, taking one part of ammonia and three parts of water at

first, and increasing the strength gradually, until the disease is subdued ; being careful always to leave the leg exposed to the air for a few minutes till the ammonia evaporates.

By this method of treatment I have succeeded in curing some old and very obstinate cases of ulcerated legs ; and if carefully persevered in, this plan may be depended on in any case, even the most chronic.

To heal any ulcer on the lower extremities, rest is absolutely necessary, and any attempt to walk or use the limb while under treatment must defeat our object. Position has likewise much influence in lessening or increasing the flow of blood to the part, and the more the limb is elevated, the recovery will be hastened.

Some are afraid to apply the iodide of lead to an open sore or abraded surface, lest the lead should be absorbed into the constitution ; but in combination with iodine it is perfectly innocuous, as the iodine acts as an antidote, and prevents its poisonous tendency. I have used it largely for ulcerated legs, and also for burns, and my experience assures me of its safety. The only objection to it as a family medicine is that it is expensive, and ironmoulds linen that it comes in contact with. But its power of healing sores surpasses every other remedy I have tried.

VESICULAR ERUPTIONS.

HERPES,

which is commonly called tetter, is the most frequent of the vesicular class. We see it often on the lips of persons suffering from cold in the head ; and it appears also on the ears, neck, or chest, in clusters of little vesicles or blisters, containing a little clear fluid, which soon becomes white, and in a few days forms a crust or scab.

A half circle of these clusters forms occasionally around the waist, and has got the name of shingles, or the girdle, to which nurses attach much importance, and imagine that if it were to go entirely around the waist it must prove fatal ; but for this fancy there is no foundation, nor does it ever make a perfect circle. It shows also a partiality for the right side, on which it forms most frequently, but it appears occasionally on other parts of the body.

Treatment.—This eruption is produced apparently by interruption to the insensible perspiration, and in any of the above forms is easily treated. The vesicles do not itch, but if touched in the early stage

with fluid diluted ammonia, they collapse, and the person is spared the annoyance of the formation of a scab, which on the lip is unsightly.

When herpes forms on the side, the friction of the dress may irritate the vesicles, and therefore the patient should remain in bed till the eruption disappears. The affected part should be touched with fluid diluted ammonia every eight hours, leaving the surface exposed to the air for a few minutes until the ammonia evaporates; the food should be farinaceous, and stimulants should be abstained from; 20 grains of nitre should be taken in a wineglassful of water after food thrice a day, to stimulate the kidneys; and in every instance the bowels should be acted on by two grains of aloes and ten grains of Epsom salts, taken in syrup or treacle each night, unless the bowels act without medicine.

HUMID TETTER, OR RUNNING SCALL.

This is a severe form of herpes. The vesicles coalesce, or run into each other, and soon produce sores of considerable extent, often having red, inflamed, irritable bases. In such cases the tongue is coated, the pulse is generally feverish, and the whole constitution is affected.

This form of herpes is technically called eczema, and is always difficult to treat, being little inclined to yield to the action of medicine. It indicates a deranged state of the constitution, and a depraved state of the blood of old standing; and attacks frequently the heads of children who have been spoiled by gross, improper food.

Treatment.—In treating this form of herpes, we must depend chiefly on constitutional remedies, without which local applications avail us little.

If the patient be an adult, half a grain of podophylline with ten grains of Epsom salts should be given in syrup or treacle, for two nights in succession, to unload the bile ducts and evacuate the bowels; and afterwards the bowels should be regulated by two grains of aloes with ten grains of Epsom salts, at night, when required.

The food of such patients should be entirely farinaceous; alcoholic drinks must be abstained from, two-milk, or rennet whey, toast water, or plain water, being substituted for stimulating drinks. And two grains of the iodide of potassium should be taken in a wineglassful of water after breakfast and dinner until the eruption declines.

The sores should be sponged night and morning with a saturated solution of common washing soda, or with a solution of sal ammoniac, two drachms to the ounce of water, and then dressed with iodide of lead salve, one drachm to the ounce of fresh-rendered suet, spread on thick calico. Perseverance in this treatment will succeed; but improvement is always tardy, and must be waited on.

If the patient be a child that is teething, the head is a favourite locality for running scall; but we find it occasionally on the face and other parts of the body.

The vesicles, wherever situated, show a tendency to coalesce, or become confluent; and when irritated by friction a nasty discharge sets in, and soon covers the whole scalp with scabs, or converts it into a red, ulcerated surface, the pain of which makes the poor child feverish, irritable, and often sleepless for nights in succession.

In addition to improper feeding, bad air in crowded damp situations is highly calculated to foster this affliction, and we should endeavour to correct both of these causes.

If the child has a moderate supply of breast milk, all other feeding must be withheld. And if it be weaned it should get only milk, with one-third of it lime water, if the bowels are relaxed; and if costive, one-third of plain water, with a little sugar. It is absolutely necessary also that the child be fed at proper intervals, not oftener than every three or four hours, as eating too frequently prevents the formation of good blood.

If the scabs be hard, they should be softened by a bread and water poultice, allowed to remain on all night; and next morning the scabs should be picked off, and the surface sponged with a saturated solution of washing soda, and then dressed with iodide of lead salve, one drachm of the iodide to an ounce of fresh-rendered suet, spread on thick calico, the sponging and plaster being renewed every morning and evening till the disease is cured.

Cod-liver oil should also be given to the child, beginning with half a teaspoonful, at first once a day after its food, and afterwards twice a day, the quantity being gradually increased to a dessert-spoonful twice a day.

If the child's bowels are confined, it should get half a grain of aloes with four grains of Epsom salts, in syrup or treacle, once a day, if required.

Change of air in such attacks always has a benign influence, and

removal to the sea coast, if the weather be seasonable, is certain to save a great deal of dosing.

After recovery animal food must not be indulged in, or a relapse may be calculated on. Milk, or thin farinaceous food, is greatly preferable. Indeed, the habit of giving animal food, in any form, to children before they have got their second set of teeth, is very reprehensible, and seldom fails to produce suffering, by causing bowel complaints and eruptions on the skin.

SUN BLISTER.

Persons exposed to the sun's rays sometimes get vesications on the skin, somewhat like humid tetter ; but this eruption is always mild and easily cured, by sponging the part night and morning with a saturated solution of washing soda, and then dressing it with a little fresh lard or rendered suet, spread on cotton, to protect it from friction.

CHILBLAINS AND KIBES.

This vesicular eruption, the former on the feet or hands, and the latter on the heels, is produced by cold affecting these parts, while the skin is suffering from suppressed perspiration.

When attended to early they are easily cured, by touching the discoloured parts night and morning with fluid ammonia ; or, if this be not convenient, with oil of turpentine, or with kerosine ; but these latter are not so efficient.

If sores have formed they should be dressed with iodide of lead salve, two drachms to the ounce of rendered suet ; or with equal parts of Venice turpentine and suet ; but poultices are injurious to such sores.

To escape a return of this annoyance the patient must exercise more in the open air, wear warm gloves and stockings, and choose roomy boots and shoes. Boots with tight elastic sides impede the circulation of the blood, and cause cold feet, discomfort, chilblains, and kibes. Persons of a pale complexion should also take ten drops of the solution of the perchloride of iron, in a wineglassful of water, after breakfast and dinner, to improve the state of the blood.

BLEBS, CALLED ALSO PEMPHYGUS OR POMPHOLYX.

These are large vesicles filled with matter, which often appear on children, and indicate a diseased state of their blood. And as blood

is produced from the food we eat, but must be oxygenised by the air we breathe, both must be good to enable us to enjoy perfect health.

To persuade mothers and nurses of the paramount necessity for care and attention in the feeding of children, is a difficult task. Still it must be attempted, and if the mother's milk seems to disagree with the infant, we must advise a change to equal parts of cow's milk and water, with a little sugar. If the child be weaned, we must have it restricted to milk only, or to fluid farinaceous food, until it gets its second set of teeth; and if it be older, we must dissuade gross feeding and the habit of allowing children to eat at irregular hours, as being highly injurious to health, and fruitful sources of disease.

Treatment.—Together with change of food, cod-liver oil is serviceable to children affected with blebs. Half a teaspoonful should be given at first after food, and increased gradually to a dessertspoonful, twice a day, if the stomach and bowels will bear it.

The blebs should be punctured with a needle, at a depending point, so as to allow the matter to escape; but care must be taken not to remove the skin, lest the vesicles or blebs should run into each other and form large sores. If these occur, they should be dressed with the iodide of lead salve, one drachm to the ounce of suet, and this plaster should be renewed and continued till the sores are healed.

If the child's bowels be confined, half a grain of Socotrine aloes, with four grains of Epsom salts, should be given in a little syrup or treacle, once a day, until the eruption is checked; and afterwards the bowels should be regulated by a little fluid magnesia.

Change of air always serves such patients.

RINGWORM.

This was formerly considered one of the vesicular diseases; but it is now known to be a parasite of vegetable origin, implanted on human beings and other animals. It is a fungus, which is the lowest species of vegetable growth, and it is found on cats, dogs, and horses, as well as on mankind.

This fungus is propagated by sporules, or globules, so small as to be discernible only by the microscope. And these particles may be carried by the air to a considerable distance; but they are generally communicated from one animal to another, as occurs with children of the same family, or attending the same school; or animals in the same place, as horses in the same stable.

It is now ascertained that the mange of cats and dogs is similar to ringworm, and is often communicated to children who play with them, and grooms get ringworm by cleaning horses. A dragoon, treated for ringworm in St. Louis' Hospital, Paris, reported that others of his companions were similarly affected; and when the barrack stables were examined, a number of the horses were found to have on their bodies round spots, denuded of hair, and covered with a whitish crust, in which the sporules, or seeds of the fungus, were easily discovered by the microscope.

Ringworm assumes different appearances on different parts of the body; on the head it may cause a bald patch, or else a severe, troublesome eruption; on the chin or beard it forms tedious, annoying sores; while on the body, or parts little covered with hair, it appears in patches of a circular form, covered with a bran-like scab; producing a blemish rather than a cause of local pain or suffering.

Each of these forms was, till lately, considered a different species of disease; but the microscope has shown that they are all the produce of the same fungus, altered in appearance by the differences of soil on which it is implanted, and by difference in the constitution of animals.

Treatment.—To cure ringworm, the mineral salts, being pernicious to vegetable growth, are found to be always efficient.

The popular lotion for the cure of ringworm is composed of corrosive sublimate, one of the strongest preparations of mercury; and as this, when used, may be absorbed into the blood, it is a hazardous remedy.

Ink is also frequently applied to the diseased spots; but in this the copperas, or sulphate of iron, is the active agent; the colouring matter only disfigures the patient and lessens the good effect.

Bluestone (the sulphate of copper) applied night and morning to the affected parts, for a few times, is both safe and effectual in curing. When the presence of hair does not render it inconvenient, the affected parts should be rubbed night and morning with a piece of bluestone, moistened with water; but a saturated solution (as much as water will dissolve) does equally well when applied to the roots of the hair with a feather or a camel's-hair pencil.

Nitrate of silver (caustic) is also a good remedy. It gives more pain than the application of bluestone does, but it penetrates more deeply than the latter; and in some obstinate cases of the head and beard it is very serviceable. The solid caustic, moistened with water,

should be applied freely to the part affected, and a little beyond it, to destroy all the sporules or seed.

CHLOASMA.

This is also a parasitic affection, somewhat similar to ringworm ; but the parasite is of a different kind. The animalcule seems to choose for its abode the network or membrane placed between the cuticle and true skin. This membrane it removes or alters so completely, that parts that were formerly of a dark complexion, become snowy white, while those that were fair are changed to a dark yellow or light brown.

The presence of the animalcule gives no pain, and is recognized only by discoloured spots or patches, appearing on the chest, neck, shoulders, arms, or hands. It is seldom seen on the face ; one such case only occurred to me ; and it is not contagious, or communicated to others.

It often appears, forms a few spots, and then leaves of its own accord ; while in other instances it spreads rapidly, and alters the complexion very much.

Treatment.—This parasite is difficult to remove, because the cuticle shields it from the influence of our remedies. The best applications are nitrate of silver (caustic) moistened with water, and rubbed frequently on the discoloured patches, and for some distance around the spots ; repeating the caustic after each exfoliation of the cuticle, till the natural colour is restored. Sulphuric acid (vitriol) diluted with water, eight parts to one of the acid, to be applied with a glass pencil over and around the spots, will also cure this affection. But the application must be repeated, and the acid be strong enough to partially abrade the cuticle to some extent, so as to destroy the animalcules.

PUSTULAR DISEASES.

THESE are more deep-seated than vesicular eruptions, and commence with little tumours beneath the cuticle, which soon advance above the surface, and form vesicles, that discharge matter and produce scabs.

ACNE

is a familiar type of this class. And of this there are two kinds : the common acne, which appears on the face and forehead of

both sexes, about the age of puberty ; and the rosy or copper nose, which generally attacks those who indulge too freely in the use of alcoholic stimulants.

Treatment.—In the management of this eruption especial attention must be paid to food and drink, as it is greatly influenced by the state of the stomach. The ingesta should be light and easily digested ; pastry and made dishes aggravate acne, and pepper, mustard, and all alcoholic drinks, must be abstained from ; while the bowels are regulated by two grains of aloes with ten grains of Epsom salts, taken in syrup or treacle, at night, as often as required.

To improve the state of the blood a wineglassful of infusion of camomile, or chiretta, or quassia, should be taken after breakfast and dinner. And as a local application, the eruption may be rubbed occasionally with bluestone, moistened with water. This, unless applied too frequently, does not irritate, and it has considerable influence in preventing the depressions or marks sometimes left by acne ; while, if the bluestone be applied at night, its discoloration can be easily washed off next morning.

Small-pox and this class of fevers, which we shall notice afterwards, are ushered in by pustular eruptions, while other fevers are frequently followed by them, the constitution adopting this means of eliminating the poison that remains in the system. This effort should not be repulsed by cold applications to the surface. On the contrary, it should be encouraged, by giving one ounce of sulphur with half an ounce of cream of tartar (the tartrate of potash) mixed in a pound of treacle, of which a teaspoonful is to be taken night and morning until it acts on the bowels, and then it should be taken at night only. This mixture aids the constitution very much in throwing off what is noxious, and in purifying the blood.

RUPIA.

This is a severe form of pustular eruption, indicating a deranged constitution and a depraved state of the blood. It commences with little elevations beneath the cuticle, covered with small vesicles containing a little clear fluid, which soon becomes opaque, and is discharged, leaving an inflamed base, covered with scales, and in many instances simulating lepra.

It appears first on the neck, chest, or back, and afterwards on the arms and lower extremities ; but no part of the body is exempt from its inroads, as it attacks frequently the head, face, palate, and throat.

It is distinguished from lepra by its inflamed base, which itches

very much, and by not appearing on the elbows or knees, the favourite locality of lepra.

It is generally preceded by erratic pains of the neuralgic character, and is always accompanied, and perhaps caused, by a deranged state of the digestive organs.

It is not contagious, but it is very persistent, and difficult to cure, remaining often for weeks or months, in despite of the efforts of medicine.

Treatment.—The remedies I found most useful were the hydriodate of potash or iodide of potassium, given in three-grain doses in a wineglassful of water, after breakfast and dinner ; together with cod-liver oil, taken at night, beginning with a teaspoonful, and increasing gradually to a tablespoonful each night, the bowels being regulated by two grains of aloes with ten grains of Epsom salts, in syrup or treacle at bedtime, as required. The diet of such patients should be light and easily digested, avoiding pastry and made dishes, and all alcoholic stimulants should be abstained from.

In severe cases I have experienced much benefit by removing the scales with a saturated solution of common washing soda, and then touching the inflamed bases with bluestone, or caustic, applied freely. This destroys the poison on the surface, and prevents its being absorbed into the system ; by which absorption the disease seems, in some instances, to be renewed, and greatly increased and prolonged.

Shower baths, tepid in winter and cold in summer, are very salutary during the treatment ; and a change of air, especially to the sea coast, if seasonable, always hastens the recovery.

SCALY ERUPTIONS.

LEPRA

is the most frequent of the scaly diseases of the skin. It is a very troublesome affection, which, although it yields to medicine, and seems cured for the time, is exceedingly prone to return.

It is not contagious, gives little if any pain or uneasiness, and annoys chiefly by its unsightly appearance.

It forms in red scaly circular or oblong patches, and shows a decided preference for the elbows and knees, where it appears generally first, but it often extends to the arms, legs, body and head.

Although it is not contagious, it is seen frequently on the children of a diseased parent, showing that it has an hereditary tendency ; and, like other affections of the skin, it is influenced greatly by the state of the stomach, to which our remedies must be applied.

Treatment.—Patients suffering from this troublesome disease of skin, should adopt a farinaceous and milk diet. They should shun pastry, made dishes, salted meats, and pig's flesh in every form, especially barbecue. They should also abstain from tobacco and alcoholic stimulants.

Arsenic, in most cases, is the medicine most worthy of confidence, unless there be some idiosyncrasy of constitution that makes it disagree with the person. Fowler's solution of arsenic is a convenient form, and of this three drops should be taken in a wineglassful of water, after breakfast and dinner, but never on an empty stomach ; and this dose should be increased by the addition of one drop every day, till six drops are taken thrice a day. This dose of six drops is enough for an adult, and should not be exceeded, except under medical advice, but should be continued daily until the disease disappears, which it usually does in six or eight weeks.

As an external remedy, a saturated solution of common washing soda applied to the spots to remove the scales, and bluestone or caustic rubbed afterwards on the surface, hastens the recovery.

When arsenic disagrees with the stomach, the next best medicine is the iodide of potassium, of which two grains should be taken in a wineglassful of water, after breakfast and dinner. And this medicine must also be continued for six or eight weeks, because until the state of the blood is improved, no permanent benefit may be expected from any medicine.

Neither of these medicines will have the desired effect unless the bowels act naturally, and to regulate these the patient should take two grains of aloes with ten grains of Epsom salts, in syrup or treacle, each night, if an aperient be required. As we have stated, a return of the disease may be calculated on, and, if it appears, the medicine must be repeated in the same doses as at first ; three drops only of arsenic, to be increased by one drop each day up to six drops, as formerly, together with the same attention to food and drink.

PSORIASIS.

This is another of the scaly diseases. It is very like lepra, from which it is distinguished by its locality, being seen frequently on the hands, and showing no preference for the knees and elbows ; and

also by its causing fissures or furrows in the skin of the affected parts.

It often extends over a large portion of the body and limbs, and renders the surface so irritable that the fissures in the skin shed blood when the limb is extended.

Treatment.—Arsenic is an efficient medicine for all scaly diseases, and Fowler's solution, as directed above for the cure of lepra, will generally succeed. Should it fail, the iodide of potassium is next worthy of confidence, and should be given in three-grain doses, dissolved in half a tumbler of water, thrice a day.

As an external application to heal the fissures, the iodide of lead salve, made with two drachms of the iodide to an ounce of fresh rendered suet, spread on thick calico, should be applied as a dressing over the sores, while the state of the stomach and bowels is attended to.

PITYRIASIS.

This is the technical name given to humid dandriff, which appears as a scaly, red, and moist eruption on the head.

This disease is evidently parasitic, and is little influenced by internal medicines, but soon yields to the local application of sulphur, or one of the sulphates. Sulphur ointment, made by kneading fresh lard or butter in sulphur, so as to form an ointment, and constantly applied for three days and nights in succession to the affected part, will cure this form of dandriff.

A saturated solution of bluestone (the sulphate of copper), applied with a feather or a camel's-hair pencil, every night, will also destroy the parasite and cure this disease, but not so speedily as the sulphur ointment, when constantly applied. And with either remedy the food and drink must be mild, and the state of the bowels must be regulated.

THE ITCH.

This is a parasitic disease, very contagious, and inflicted by the *acarus*, or itch insect.

It is an old and troublesome legacy, which was first described by Dr. Bonomo, in a letter communicated to the Royal Society by Dr. Mead, in the year 1703.

It is sometimes difficult to recognize this disease, because it assumes a very different aspect in one constitution from what it does in others. In some cases we see only a slight abrasion of the skin,

about the wrists or between the fingers, while in other persons we have large blebs, filled with matter, simulating vesicular disease of the skin. But a quick eye, especially if aided by a magnifying glass, may detect the insect under the cuticle, at a short distance from the inflamed part ; and it is only by seeing the insect that we can know the disease.

When viewed with the microscope, the insect is of the form of a tortoise, with eight legs.

The male wanders abroad on the surface, and is so small that it cannot be seen with the naked eye, but the female is larger, and can be easily seen with the microscope. When impregnated, she burrows under the skin, making a slight furrow, in which she deposits her eggs, at short distances from each other, and it is by this furrow that we are enabled to trace her to her hiding-place or nest under the skin.

The eggs being hatched, the young escape through the cuticle, and multiply so rapidly that a few pairs will soon be sufficient to furnish a whole colony.

This parasite chooses parts where the cuticle is thin, as at the roots of the fingers and thumbs, between the toes, and in the flexures of joints ; but it may spread to any part of the body, except the face and head, on which I have never found it to intrude.

The burrowing of the female, and the irritation caused by the young under the cuticle, cause incessant itching and scratching, from which the patient cannot refrain, and which has given a name to this affliction. And this scratching is soon followed by an eruption, unsightly and distressing to the patient, and constituting a very troublesome disease.

Treatment.—For the cure of this disease sulphur is a specific, or unfailing remedy, as it soon kills the insects, and this done, the eruption will shortly disappear.

Some use the sulphur bath, and for hospitals it is the most convenient, as one bath will serve a number of patients ; but for private practice the sulphur ointment, made by kneading butter or hog's lard in sulphur, until a firm ointment is formed, is generally preferred.

The patient having been well washed with soap and warm water, and carefully dried, the body, especially the parts that are itchy, should be smeared over with the ointment ; and being wrapped in a long dress, covering the feet, the patient should be confined to bed for thirty-six or forty-eight hours, after the expiration of which the ointment should be washed off with soap and warm water. One

application of the ointment in this manner is generally sufficient, but should it not succeed, it must be repeated.

All clothes worn previously by the patient, either at night or during the day, must be boiled in water with soda, or else baked for two hours in an oven, heated to the temperature of 220° Fahr., or burned, because washing the clothes cannot destroy the insects.

ULCERS.

These are open sores, hollowed out generally lower than the surrounding surface, and they form frequently on different parts of the skin, as we have seen, on the legs, when suffering from the old man's itch; and they form also on the mucous membrane, as in ulcers of the throat, stomach, or bowels, the skin or mucous membrane in either case being destroyed. We shall notice first the kind commonly known as the rue rub.

The patient, either male or female, goes to bed in apparent good health, but during the night some part, generally the leg, feels itchy, and is rubbed with the heel of the opposite foot, or perhaps scratched with the fingers. On getting up next morning a slight abrasion is noticed, which seems too trifling to merit any attention; but during the day an ichorous discharge issues from the spot, causing the stocking to adhere, and after this irritation a tedious, unmanageable ulcer is soon established.

Treatment.—For this and the cure of every other sore upon the extremities, absolute rest is required, and must be insisted on. The depending position must also be guarded against, and the limb should be kept elevated on a chair, while the patients sit up; and the state of the constitution, and impure state of the blood, of which ulcers give us true evidence, must be attended to.

Mercury in small doses, called alterative, was formerly the constant remedy for improving the blood, but it is now known that these small doses are the most dangerous, that they accumulate in the constitution, making it susceptible of cold, and prone to neuralgic affections for years afterwards.

We have a much safer medicine in the iodide of potassium, accompanied with cod-liver oil. Two grains of the iodide of potassium, given in a wineglassful of water after breakfast and dinner, and after tea a teaspoonful of cod-liver oil, to be increased gradually to a tablespoonful, each evening, are safe and certain alteratives of the blood. But while we thus endeavour to improve the present state of

the blood, we must be careful in the choice of materials for forming a supply of fresh blood.

The food must be light, and easily digested. Pastry, salted meats, and made dishes should be avoided; tobacco and alcoholic stimulants should be abstained from, and the drink should be toast-water, or two-milk whey. Attention should also be paid to the bowels, which should be regulated by two grains of aloes with ten grains of Epsom salts, in syrup or treacle, taken at night, if required.

While the ulcer looks red and irritable, cold water dressing is the most suitable. A piece of folded calico wet with cold water, and covered with oiled silk, should be applied, and renewed as often as it gets dry or hot. This in some cases is sufficient; but if the edges of the ulcer appear flabby, or red elevations, called proud flesh, form on the ulcer, it should be touched occasionally with bluestone, and the water dressing continued.

In some cases the cuticle around the ulcer becomes elevated and indurated, and while in this state the ulcer remains indolent, and uninfluenced by any remedy. To alter this state of things it is absolutely necessary that this elevated border be removed, and the easiest way to accomplish this object is to divide the thickened cuticle quite through at three, four, or six points, according to the size of the ulcer, with a lancet or sharp point of a penknife; then touch the indurated edge with bluestone, and continue the water dressing as before.

Such ulcers being always tedious in healing, patients often lose confidence in the water dressing, and are anxious to try some other application. Nor should this be objected to, as a change of dressing is often serviceable, and the iodide of lead salve, two drachms to the ounce of rendered suet, is very applicable.

SLOUGHING ULCERS.

These are of a different character, and require a more stimulating plan of treatment. They are characterised by the absence of any healthy action, even of any discharge, and the surrounding edges appear livid, having occasionally small vesications, or blisters, on their surface.

Such ulcers indicate a broken-down constitution and a depraved state of the blood, which must be improved before any healthy action can be established.

Treatment.—In such cases the patients are generally found to be suffering from the poison of tobacco, used in excess, or from the

abuse of alcoholic stimulants. These I have never hesitated to discard, no matter how much longed for by the morbid taste, or how confirmed the habit. Nor have I ever seen cause to regret my doing so, these stimulants being replaced by quinine and iron. Two grains of quinine, and ten drops of the solution of the perchloride of iron, the former given in syrup, and the latter in a wineglassful of water, alternately, every six hours, amply supply the place of the withheld stimulant, and by their tonic and invigorating influence soon produce a happy change in the symptoms. The lost appetite returns; for food the patient soon gets a relish, to which he had long been a stranger; restless nights are soon exchanged for refreshing sleep, and all the natural functions become altered and gradually improved.

The food of such patients should be light and nourishing—eggs, lightly boiled, not more than three minutes, if they agree with the stomach, may be eaten freely; the essence of fowl, boiled in vacuo, and Liebig's essence of meat, are nourishing; together with good stale bread, boiled rice, or a mealy potato.

Drastic purgatives do not suit such patients; but the bowels should be regulated by two grains of aloes and ten grains of Epsom salts, in syrup or treacle, at night, when required.

As a local application, such ulcers require to be stimulated either by poultices, or the application of some active acid. A poultice made with barm, or, if this cannot be had, with the grounds of beer or porter, and linseed meal, has a good effect; or boiled carrots, grated fine and applied warm, also encourage the slough to be thrown off. As soon as the slough is removed, the surface should be touched freely with bluestone, or nitrate of silver (caustic), and dressed afterwards with the iodide of lead salve—two drachms to the ounce of rendered suet, spread on thick calico.

LUPUS, OR NOLI ME TANGERE.

This is a corroding ulcer, very intractable, and generally disfiguring to the patient.

There are two forms of it. One commences on the top or sides of the nose, with elevated pustules, having red, inflamed bases; which, under proper care, and with strict attention to food and drink, heal after a time, leaving only slight depressions on the surface, as remembrancers of their presence.

The other species of lupus begins with livid-coloured pustules, which soon form eating ulcers, that always destroy a part of the

nose, and, in some cases, remove piecemeal the entire nasal organ.

Treatment.—In this disease the constitution must be improved by the same regimen and remedies as those recommended above for sloughing ulcer; for until the blood is purified and the general health improved, local applications can do little.

To prevent the ulcer from spreading, the diseased portion must be removed by some powerful caustic, and for this purpose the chloride of zinc is very efficient; but, as a family medicine, the nitrate of silver (caustic) is more manageable. One of these should be applied to the ulcer every day, until the diseased portion is removed; and then the sore should be dressed with the iodide of lead salve, two drachms to the ounce of rendered suet, until it heals.

When visiting Paris in 1840 I found that the French surgeons prefer the actual cautery, or red-hot iron, to any other caustic for removing the diseased portion. It is certainly the most efficient application; and, as it destroys the sensibility at once, it may give as little pain as the chloride of zinc or nitrate of silver; but I never tried it.

BOILS.

Although these are tumours, which form in the cellular substance under the skin, yet, because they come to the surface before they terminate their course, they are popularly reckoned to be skin diseases.

They vary in size from that of a pea to the bulk of a walnut. They are generally seen on the arms, legs, or about the neck; but they are found on all other parts of the body, and do often choose the position which is most disagreeable to the patient.

They follow frequently as a sequel to fevers, no doubt aiding the constitution in throwing out what is noxious; and they always indicate a diseased state of the blood, though we may not be able to assign a sufficient cause, such as fever. And they are seldom single in their attacks, but come in clusters or close succession.

They are always tedious in their process, because, the skin being a yielding membrane, dilates over them, until at length it becomes adherent to the tumour, by inflammation caused by this distention. During this slow process the pain is very acute, and generally badly borne by persons, who are deprived, by what seems a trifle, of attending to business or their usual social enjoyments.

Treatment.—To abridge this delay, and lessen the consequent

suffering, many expedients have been tried. Mercury and iodine have been applied externally, with the hope of causing the tumours to be absorbed in the incipient stage; and the boils have been bound down with adhesive plaster, to make the skin adhere to the tumour, and by that means hasten its approach to the surface. These means, in my experience, have proved futile, retarding the recovery and disappointing the patient.

The true plan to prevent a crop or succession of boils, is to improve the state of the blood and the general health, by strict attention to food and drink; frequent warm baths, at 100° Fahr.; warm clothing, to favour the insensible perspiration; and change of air, if it can be obtained; while we assist the constitution to eliminate what is injuring it, by giving an ounce of sulphur and half an ounce of powdered nitre, mixed in a pound of treacle, in teaspoonful doses, every night and morning, or less frequently, say every night, if it acts much on the bowels.

A tonic, to improve the powers of digestion, is also requisite; and half a grain of quinine should be taken after breakfast and dinner, or else a wineglassful of infusion of chiretta or quassia; but alcoholic stimulants should be abstained from.

As a local application, nothing soothes pain better than a poultice of bread and water; or the ancient remedy, a ripe fig.

Some advocate a free incision with a lancet, to allow the core to escape; but the advantage of this seems doubtful, and I would strongly dissuade its adoption before suppuration is fully established. At an earlier period it only irritates, and inflicts pain without any beneficial result.

A poultice should not be applied until pain renders it necessary, nor should it be continued after nature has expelled the core or diseased portion of cellular membrane that formed the matrix of the boil; because, when poultices are applied too soon, or retained too long, they cause vesicles or sores on the surrounding skin, that add to the annoyance.

When the core is expelled the boil presents a red cavity, free from pus, requiring only a bit of gummed silk, or adhesive plaster, to protect it from injury.

CARBUNCLE.

This disease forms also in the cellular substance under the skin, and is similar to boil, in a magnified degree. It is not peculiar to any one class of society, nor to either sex; as we meet with it

among the rich and pampered, as well as the poor and indigent ; but of the sexes, it shows a preference for males rather than for females.

Carbuncle may form on any part of the body ; but it appears most frequently on the neck, shoulders, or buttocks. The induration under the skin is generally circular in form, and from one to three or more inches in diameter.

Such extent of tumour pressing on the skin and surrounding parts, soon causes a burning, incessant pain, with great constitutional disturbance, sleeplessness, loss of appetite, marked prostration of strength, and equal depression of spirits and energy.

Treatment.—To alleviate these symptoms and husband the vital powers, the constitution should be supported with light nourishing diet, avoiding alcoholic drinks, especially of the fermented class, and supplying their place with one grain of quinine and ten drops of the solution of the perchloride of iron, to be taken alternately every eight hours. The bowels, meantime, should be regulated by two grains of powdered aloes and ten grains of Epsom salts, taken in syrup or treacle each night, if required.

To allay pain and reconcile sleep, an opiate is generally required, and Dover's powder, the compound powder of ipecacuan and opium, is the best form, as the ipecacuan in it promotes perspiration, and is otherwise useful. Ten grains given in a little syrup at night is the proper dose for an adult male, and six for a female.

As an external application I prefer a piece of surgeon's lint, or else cotton wadding, moistened with warm water and covered with oiled silk, to prevent evaporation. This should be changed frequently, to keep the surface warm and moist. Some prefer poultices, to which their weight is the only objection, and a great variety might be mentioned ; but while the skin is not broken, warmth and moisture possess all the virtues of every poultice, and bread and water, or linseed meal boiled in water, is soothing and comfortable in the first stage of this painful disease.

Carbuncle is still more tardy in suppurating than boils are ; but after a time small holes appear on the surface, exposing the core or diseased portion of the cellular membrane underneath, which must be removed ere the carbuncle can be cured.

To hasten the removal of the core, a crucial incision is often made through the entire diseased mass. This is the speediest means of cure ; but it is a severe remedy, that may be dispensed with if the patient be very timid and prefers waiting on the efforts of nature.

Still the continuance of pain is trying to any constitution, and the relief obtained by a free incision is so great, that the operation should not be objected to, because, if the part be benumbed by the application of ice or a spray of ether thrown upon it, the pain is trifling.

After this period carbuncles require a stimulating poultice. Carrots grated and then boiled do very well, and should be renewed as often as they get dry. Linseed meal boiled with barm, or the grounds of ale or porter, is also a favourite poultice. And with such treatment the core will soon be thrown off, and the part healed. After recovery change of air is very salutary, and highly advisable.

PURPURA, OR THE PURPLES.

This disease is caused by an effusion of blood into the cellular substance under the skin, appearing, in some instances, in small points, like fleabites, and varying in size to the bulk of a pea, or perhaps to large purple blotches.

It appears first on the legs and arms ; argues a diseased state of the blood ; and when it affects infants or aged persons it generally proves fatal. It is not peculiar to any one class of society, as we meet it in the opposite extremes of poverty and luxury.

Sometimes the effusion of blood occurs internally, and we have hæmorrhage from the gums, tongue, stomach, and bowels, as well as from the skin. The effects of this disease upon the patient are very marked and depressing. The pulse becomes small and frequent, the extremities cold, and the countenance perfectly dejected.

Treatment.—Absolute rest should be enjoined in such cases, as the least exertion on the part of the patient is injurious. Warmth should be secured by flannel coverings, and the constitution must be supported by light, nourishing diet,—eggs little boiled, Liebig's essence of meat, or fowl boiled *in vacuo*, by cutting a chicken into small pieces, putting into a bottle without water, corking the bottle well, and then putting it into a pot of cold water, to be boiled for half an hour.

The medicine I have found most useful is the spirit or oil of turpentine—twenty drops to be given on sugar, or rubbed up with the yolk of egg, every two hours till the patient is better, and then every four hours until recovery is established. This dose is sufficient for an adult, ten drops being enough for a child of twelve years, and five drops for a child of six years, and two drops, given on sugar, for an infant.

This medicine suits the internal as well as the external effusion of

blood, and generally acts sufficiently on the bowels. Should it fail to do so, one grain of aloes and five grains of Epsom salts should be given, in syrup or treacle, at night to an adult, and half that quantity to a child. But purging is injurious.

ANIMAL PARASITES ON THE SKIN.

Three kinds of pediculi or lice are found as parasites on human beings. One sort is large and peculiar to the body; another kind selects the head only; and the third variety may be seated on any part covered with hair, except the head, on which, I believe, it never trespasses, although I have seen it on the eyebrows.

The last-mentioned species is commonly called the crab-louse, being rounder in form than the other two. It is very sedentary in its habits, and seldom wanders about, but clings to the roots of the hair, causing incessant itching and great irritation.

Like other parasites, these creatures are marvellously prolific, and, if neglected, will soon produce a sufficient stock for any district. Proper attention to cleanliness is generally sufficient to prevent their incursion; but in certain states of the constitution, and a depraved condition of the blood, additional aid may be necessary.

Treatment.—For the destruction of pediculi, or lice, sulphur ointment, made by kneading butter or hog's lard in sulphur, until a firm ointment is formed, if smeared on the body, or rubbed into the roots of the hair, and washed off next morning with soap and water, seldom fails. But mercurial ointment used similarly, though not so safe, yet it is more certain in its effects.

The eggs or nits are difficult to get rid of or remove, as they adhere to the hairs with great tenacity; but wetting the hair with brandy or other spirit, or with vinegar, dissolves the gum by which they are attached, and then they can be easily combed or brushed off.

Since the days of Herod the king, body-creepers have been known to destroy life, and modern instances of this result are not solitary.

Dr. Whitehead, in his treatise on morbid taints and tendencies, published in 1857, gives a very interesting case. A robust farmer, aged forty-three years, contracted a severe form of disease by immoral conduct in 1840, of which attack he was cured by iodurated sarsaparilla and mercury. This patient again sought advice in 1841, being then suffering from lice on his person. He was scrupulously clean in his habits, and was never before troubled in a similar manner; yet the vermin increased so rapidly, and produced such mental distress, that fears were entertained for the safety of his

intellect. On examining his skin, a number of irritable points were observed on the front and sides of his chest, from which the nits could be detached by pressure ; and the insects generated so quickly that a flannel vest put on in the morning would be crowded by the end of twenty-four hours. In this case for some time all remedies were unavailing ; sulphur, mercury, and hellebore produced little, or only temporary benefit. At length iodide of potassium and prussic acid, given in full doses, were tried, and after sixteen draughts had been taken he was permanently cured.

In the only case that occurred to me there was no taint left by any previous disease. The patient was a young clergyman of unblemished character and temperate habits, and yet the disease was so obstinate that it resisted the influence of every remedy, and proved fatal, after weeks of suffering ; but the iodide of potassium and prussic acid were not tried, and therefore I record Dr. Whitehead's plan. Our common fowl are subject to vermin, which, being of a different species, cannot become parasites on human beings ; but as visitors they are often sufficiently troublesome, and in hot climates, as in Australia, soon overrun a neighbourhood.

These are easily prevented by discarding hay, and by making the hens' nests of fine sand or sawdust, mixed with a tablespoonful of sulphur for each nest. And a similar mixture of sand with sulphur should be kept in the fowl yard in an open box for the fowls to roll in.

As parasites on cats and dogs, fleas often multiply and cause considerable annoyance to human beings. They are certainly the least objectionable of vermin, because their agility in hopping is calculated to amuse us, while their docility cannot fail to astonish us, when we see them, as in Smithfield, London, trained to harness, and pulling a carriage, ten or a dozen of them following in file.

To enact any severe measures against creatures having these good qualities to recommend them to our favour may seem harsh, but as it is notorious that they are disturbers of our peace, and blood suckers as well, it is consistent with both ancient and modern law that their life should pay the forfeit. For this end a decoction of any strong bitter, as wormwood, quassia, or tea, green being preferable, may be used to wash cats and dogs, and to sprinkle over carpets and floors. One pound of either, boiled in two gallons of water, is sufficiently strong ; and tea leaves, while moist, spread over floors are serviceable.

ABSCESS.

An abscess is a concealed sore, and different, therefore, from ulcer, which is an open sore. This affection is the result of inflammation, causing an effusion of lymph into the cellular membrane, the sheaths of muscles, or beneath the periosteum of bones; and such effusion may be either superficial or deep-seated. Such lymph when converted into pus constitutes an abscess, whether it be superficial or deeply seated.

Superficial abscess is generally the result of injury or contusion; but either this or internal abscess may also be caused by inflammation, and a deranged state of the constitution. The attack is indicated first by a feeling of stiffness in the part affected, which is soon followed by a sensation of heat and pain, accompanied with tension, and redness, if it be near the surface; and the formation of pus or matter in such cases is generally heralded by a rigor or shivering fit.

Treatment.—If taken early, a few leeches, from half to a dozen, according to the strength of the patient, if applied over the part, relieve the tension and abate the inflammation and the pain; which being done, a plaster of iodide of lead ointment, two drachms of the iodide to the ounce of lard, spread on thick calico, and applied over the part, will generally cause the absorbents to remove the effused lymph, and save the patient a great deal of suffering.

But if we have reason to consider that suppuration has already commenced, it should be hastened by poultices moderately hot, and any kind that keeps the part warm and moist does equally well. A piece of surgeon's lint or wadding, pressed out of hot water, and covered with oiled silk to prevent evaporation, forms a good poultice, if changed as often as it gets cold or dry. Linseed meal, on account of the oil it contains, retains moisture best, and is the most eligible, as it requires few changes.

When matter is fully formed it is advisable to open the abscess, because we can choose the most depending point, and thus allow free exit to the contents by a favourable avenue. This object should not be overlooked, because nature sometimes causes the abscess to burst at a point from which the entire contents cannot escape. This prevents the abscess from healing, and forms a sinus, or narrow passage, from which matter will continue to escape, annoy the patient, and injure the health.

WHITLOW OF THE FINGER.

This by a popular error is taken to be a disease of the skin, but it is much deeper seated than the skin.

There are two kinds of whitlow—the superficial, caused by inflammation of the sheaths of the tendons that enable us to bend the fingers ; and the deeper seated, caused by inflammation of the periosteum or membrane that lines the bones of the fingers ; and matter forming in either of these situations.

It is difficult sometimes to distinguish in the early stage between these two kinds of whitlow ; and as it is important to be able to do so, I shall endeavour to point out the marks of distinction as plainly as possible.

In the deeper seated whitlow, affecting the membrane that covers the bone, the pain is felt most acutely when pressure is made on the point or end of the finger ; and in the more superficial whitlow, affecting the sheath of the tendon, the pain is felt most when pressure is made on the front of the finger, between the first and second joint, or between the first joint and the point of the finger.

Either form of this disease is attended with great danger, and is intensely painful. The deeper seated whitlow, affecting the periosteum, may cause exfoliation of the bone and loss of the first joint of the finger, after weeks of sleepless nights and months of suffering. The more superficial whitlow affecting the sheath of the tendon is calculated to deprive the patient of the use of the entire finger by the inflammation extending from one joint to another.

Treatment.—To arrest the progress of the inflammation, and prevent an unfavourable issue, two or more leeches, according to the strength of the patient, should be applied to the finger, over the most painful part, and their bites should be fomented with warm water to encourage them to bleed. After the leeches, a bread and water poultice, moderately warm, should be applied around the finger, taking care to support the hand in a sling from the neck.

In the absence of leeches, holding the finger for a few minutes near a hot fire, or dipping it hastily into boiling water, and then poulticing, may succeed.

These measures, to be useful, must be adopted early, the first or second day ; but if the pain has continued for some time, and is so severe as to prevent sleep at night, this is evidence that effusion has occurred ; and the only cure then is to make a free incision down to the seat of the disease, and allow the fluid to escape. If this be done

in good time, before the bone becomes affected, many sleepless nights and much agonising pain will be averted, and injury to the bone or tendon may be avoided; while the operation is perfectly safe, and the pain transient and trifling, compared with the constant agony of whitlow.

If there be reason to think that the bone is affected, an incision should at once be made down to the bone, with a scalpel or sharp penknife, for a lancet does no service. The back of the hand being rested on a table, and an assistant holding the wrist, the point of the instrument should be introduced, half-way between the first joint and the point of the finger, and carried at once down to the bone, and out to the point of the finger.

If the incision be made just in the centre of the finger, the artery will be cut across, and cannot bleed too much, and the operation must be successful, as it will relieve both the sheath of the tendon, and the periosteum at the same time. But a superficial incision with a lancet, dividing only the skin, causes equal pain, does not reach the seat of the disease, and must disappoint the patient, if it does not irritate and aggravate the disease.

When bleeding ceases after the incision, bread and water or linseed meal poultice should be applied night and morning till the wound heals.

Whitlow may occur also in the palm of the hand by inflammation of the sheath of a tendon, caused from pressure, or contusion with the handle of a spade or some other implement. And in this form of attack we must apply from six to a dozen leeches, foment and poultice as directed for the finger, being equally careful to keep the hand supported by a handkerchief around the neck, but not raised higher than the elbow, lest the effused matter should be thrown forward on the wrist, and thereby cause inflammation of that joint.

The network of arteries in the palm of the hand renders it hazardous to make incisions there, and when matter forms it is necessary to wait until it shows a tendency to point on the surface; and then the skin, which is always thick in this locality, should be divided to allow the matter to escape.

As soon as this object has been accomplished the poultice should be discontinued, and the sore dressed with the iodide of lead salve, two drachms to the ounce of rendered suet, which will stimulate the absorbents, and remove any induration that might afterwards impede the action of the affected tendon, or influence the proper use of the fingers of that hand.

THE HAIR.

As hair is an adjunct to the skin, and of great importance to the comfort and comeliness of the human race, we shall notice it here. In structure it is similar to horn, and much more subject to diseases, some of which have been already mentioned when treating of ring-worm on the scalp and dandriff.

Each hair has a bulb or root, and consequently a separate existence, capable of being influenced by whatever affects the constitution generally. This is proved by the hair falling after fevers, even of a mild character, and by its falling even in youth with persons suffering from phthisis, consumption, and other causes of debility; while persons of robust constitutions often retain their hair, unaltered even in colour, at an advanced old age.

We know, however, that persons who are apparently in robust health do often lose their hair early in life, for which it is equally difficult to account, as it is to give any good reason why the hair should fall off the crown of the head while it remains abundant on the back part of the head, on the face and chin.

Nor can any very satisfactory reason be assigned for the hair, with some persons, changing colour and becoming grey before the age of thirty; while others at eighty have not a single grey hair.

The state of the skin, we observe, has an immediate action on the hair, as cold, with all animals, makes the hair bristle, or stand erect; but this may be accounted for by the contraction of the skin compressing the hair bulbs; which effect is also produced by extreme fear.

The mind also has great influence on the state of the hair. Few close students retain their hair after the meridian of life; and intense anxiety of mind has been known to change the colour of the hair in a single night, as is related of Mary Queen of Scots, Sir Thomas More, and some others.

Treatment.—For premature change in the colour of the hair, no remedy has been discovered, except the dye of the artist, or the application of some preparation of lead; and recourse to either of these devices cannot be recommended, because neither is safe when brought into contact with the skin, while the growth of the hair makes the use of dyes of only transient benefit.

For loss of hair judicious treatment is generally successful, unless the bulbs or roots have been entirely destroyed; but falling of the hair should be attended to early, for the rule is invariable that

the older the disease is, by so much the more difficult will be its removal.

For restoring or improving the growth of hair, shaving is the most successful remedy. As soon as the hair begins to fall the head should be shaven regularly once a week, and this should be continued for some months until a full growth of hair appears on the top of the head. This operation is easily performed, and gives no pain if commenced on the crown of the head, and carried downwards, and the only reasonable objection to this remedy is the necessity for wearing a wig till the hair grows again.

When this difficulty is insurmountable, and in cases of partial loss of hair, friction with a stimulating liniment night and morning generally succeeds; but bear's grease, or other animal oil, has nothing to recommend it above vegetable oils, which are cleaner.

The oil or spirit of turpentine is an excellent application, and castor-oil is also serviceable, but the perfume of these is objectionable. The strong fluid ammonia (hartshorn) is very efficient, and was always preferred by my patients, because it was free from any disagreeable odour. About half a teaspoonful should be rubbed on the head night and morning, leaving the head uncovered for a little till evaporation takes place, and taking care that it does not fall into the eyes, which it would inflame.

THE MUCOUS MEMBRANE.

THIS membrane is twin sister to the skin, of which it seems a continuation, and performs the same good offices internally that the skin does externally.

We find it lining the mouth, nostrils, throat, stomach, and bowels, as well as the air tubes, and other internal passages and cavities.

Its action is similar to that of the skin, secreting and absorbing fluids, while it also gives protection to arteries and nerves; and it likewise has its diseases, of which the most familiar is cold in the head.

DISEASES OF THE MUCOUS MEMBRANE.

CORYZA,

or cold in the head, is an inflamed state of the mucous membrane of the nostrils, of which the first symptom is a sensation

of dryness in the nostrils and upper part of the throat, owing to the obstruction of the natural secretion. To relieve this obstruction, a reaction soon follows as a consequence, and nature throws out a superabundant discharge of mucus, which, if not sufficient to check the inflammation, must be followed by the formation of pus.

Such attacks of inflammation of the mucous membrane are often experienced by persons, who, having been exposed for some time to a cold air, come hastily into an over-heated room, or rush to a fire to inhale heated air ; or who drink some hot fluid, without waiting to allow heat and the circulation of the blood to be restored gradually. Similar injury may also be inflicted by being exposed suddenly to the cold night air after leaving a crowded theatre, or other over-heated room. Sudden changes of temperature are always injurious to the mucous membrane as well as the skin.

The same cause which injures the mucous membrane of the nostrils affects generally the larynx, or upper portion of the air tube ; and is often carried thence to the lower portion, or bronchial tubes of the lungs, causing inflammatory action in perhaps all of these.

A cold in the head is of itself unimportant ; but as a premonitory symptom of threatened inflammation of the larynx, which is always troublesome, and to be dreaded ; or as a precursor of approaching inflammation of the bronchial tubes, which in the mildest case leaves a thickening not desirable, and in severe cases may prove fatal to the aged and infirm,—attacks of this kind merit more attention than is commonly paid to them.

Persons who are delicate or susceptible of cold should be careful to avoid sudden changes from a hot to a cold atmosphere, and the reverse ; nor should they expose themselves to a draught or current of air, which carries off the animal heat too rapidly.

Even the most robust should avoid such exposure when they are overheated or exhausted by previous fatigue ; nor should any one take a cold bath under such circumstances, because the constitution when below par cannot react sufficiently to be invigorated or benefited by cold bathing ; and wet feet, sitting in damp clothes, and sleeping in damp sheets, are fruitful sources of colds and inflammations.

Treatment.—If the attack be slight, and the head only affected, it is generally sufficient for the robust to take a glass of cold water when going to bed, and have a hot bath for their feet ; but the delicate, in addition to the hot bath for the feet, should drink a

tumbler of warm toast-water or two-milk whey, while wine and all alcoholic stimulants should be abstained from.

If the attack be more severe, accompanied with difficulty of breathing through the nostrils, owing to the thickening of the mucous membrane, together with an uncomfortable sensation in the limbs, and chilliness, particularly along the spine, the patient should as soon as possible, have a warm plunge-bath at 100° Fahr., and remain in it twenty minutes or half an hour, unless faintness supervenes. When removed from the bath the body should be well dried, and the person be put to bed between blankets; then six grains of Dover's powder should be given to an adult, and half that quantity to a child of twelve years, in syrup or treacle. No drink should be given for an hour after the powder, lest the stomach should reject it; but afterwards warm toast- or rice-water should be taken freely to encourage perspiration, which having continued for eight or ten hours, the blankets should be replaced with well-aired sheets, and the patient should remain in bed till the unpleasant symptoms go off.

With some, perfect recovery requires rest in bed for a few days, but one day, at least, should be given in every severe case. The food should be farinaceous, and the bowels should be acted on by half an ounce of Epsom salts, given in a cup of ginger-tea.

By such means much suffering may be averted, many chronic coughs prevented, and many a premature grave might have been avoided.

LARYNGITIS.

Inflammation of the larynx, or upper part of the air tube, may be caused by the same exposure to a sudden change of temperature, either hot or cold, as we have mentioned above as giving rise to coryza, or cold in the head, or by exposure to wet; but this disease is much more formidable than common cold, and if neglected may prove fatal, especially at an advanced period of life.

The symptoms of this disease are a sensation of stiffness at the root of the tongue, a feeling of constriction in the upper part of the throat, slight difficulty in swallowing, pain externally when the larynx is pressed on either side, a tickling sensation in the throat and tendency to cough, hoarseness of voice, and, in bad cases, the articulation of sounds very indistinct, together with difficult respiration.

As we cannot exist many minutes without breathing, the last-

mentioned symptom gives a characteristic expression of countenance to those who suffer from it. They become restless and apprehensive of danger, and apt to start suddenly from sleep, greatly excited, and gasping for breath.

Laryngitis does, however, frequently set in insidiously, with the symptoms merely of sore throat, the inflammation meanwhile advancing from one portion of the mucous membrane to another, until the whole larynx is involved. And a chronic form of this disease is often present with consumptive patients, and tends much to aggravate their sufferings, and complicate the treatment.

Treatment.—To arrest the inflammation, nothing has a better effect than a warm bath, at 100° Fahr., for half an hour or longer, unless faintness supervenes. When well dried the patient should lie between blankets, take ten grains of Dover's powder in sugar or treacle, or, if opiates disagree, let three grains of hyosciamus be substituted, and one hour afterwards drink warm toast-water or two-milk whey, to encourage perspiration, which should be kept up till morning.

After the bath a mustard plaster should be put around the entire neck, and kept on for twenty minutes or half an hour, so as to make the skin red ; and this should be repeated every eight hours, till the inflammation is subdued. Each morning the damp blankets should be exchanged for dry ones, and the warm bath and Dover's powder should be repeated every evening until the cough abates, and the freedom from pain and difficulty of breathing give evidence that the disease is checked.

The food of such patients should be entirely farinaceous,—ground rice boiled in water and eaten with milk, or arrowroot or maizena used similarly. The drink should be toast-water or two-milk whey ; and the bowels should be kept acting by half or one ounce of Epsom salts given every morning.

Stimulants, as ale, porter, wine, &c., must be abstained from, and the patient should not attempt to leave his bed until convalescence is fairly established, and the absence of fever and every uncomfortable feeling warrant his safety in doing so, and his fitness for a change of food, and the fatigue of sitting up.

This plan of treatment, if adopted early and persevered with, will not disappoint ; but many persons, feeling relieved by the first hot bath and Dover's powder, have got up next day, increased the inflammation, and caused such obstruction to the breathing, by thickening of the mucous membrane, that nothing but the surgeon's

knife, to open the trachea or lower portion of the windpipe, could rescue them from suffocation and death.

In the management of such cases we must not be guided by the number of hot baths and other applications, but by the effect produced. On the contrary, we must persevere until we succeed in curing the disease. And, to prevent a relapse, the constitution should be fortified by a shower bath every morning, tepid at first, and cooled down gradually, to prepare it for exposure to the open air.

DIPHTHERIA.

This is a severe affection of the throat, which, when it attacks the glottis and larynx, generally proves fatal. Its name signifies a double membrane, because it was formerly thought to be produced by an exudation thrown out on an inflamed surface. The microscope shows, however, that the whitish yellow spots on the tonsils and soft palate are formed by a vegetable parasite. Solitary cases of this disease do occur; but it generally appears as an epidemic, and is very infectious.

The first symptoms of this disease are great depression, chilliness, nausea, and occasionally diarrhoea. The throat feels stiff, with some difficulty of swallowing; but not much pain, until the parasite extends to the nostrils, the pharynx, and the glottis. The fever which accompanies diphtheria is of a very depressing character, and patients recovering from it are exceedingly weak, and are often paralysed for months afterwards.

Treatment.—The patient should be confined to bed, and not allowed to waste his strength by any effort. Local applications, to destroy the parasite and prevent its spreading, are most to be depended on; and for this purpose the mineral acids and their salts are trustworthy. In my practice, the nitrate of silver (caustic) was the most satisfactory—thirty grains dissolved in an ounce of water should be applied to the throat by a camel's-hair pencil or feather, night and morning; or the spots may be pencilled with the solid caustic, if preferred. Some speak highly of a saturated solution of Epsom salts applied to the throat every six hours; while others prefer a saturated solution of sal ammoniac, and both are good.

The poison of the parasite soon affects the system, and the best antidotes are ammonia and chlorate of potash; while the constitution must be supported with nourishing fluids—beef or mutton tea, chicken broth, and milk. A cupful of one of these should be given

every three hours to an adult, and in it five grains of carbonate of ammonia, or ten grains of chlorate of potash, alternately ; so that each of these shall be given every six hours, and one of them every three hours along with the food.

If the bowels are confined, they should be regulated by a table-spoonful of castor oil ; but if diarrhoea annoys, it should be corrected by twenty drops of laudanum in a dessertspoonful of milk or sweet oil, injected into the bowel by a small syringe.

When convalescent and able to eat solid food, it ought to be very mild—a lightly-boiled egg, or roast pullet with stale bread, once a day ; and one grain of quinine should be given after the solid food ; but the ammonia and chlorate of potash should be continued till strength returns.

BRONCHITIS.

This is the technical name given to inflammation of the air tubes, or bronchia, that ramify through the lungs. These tubes, commencing with two at the termination of the trachea, divide into a multitude of smaller passages, which traverse the substance of the lungs, and terminate in small cells, from which the blood-vessels receive oxygen, to renovate the blood and change it from venous to arterial.

This species of inflammation, commonly called catarrh, may be acute or chronic, the latter being generally the sequel of the former, badly treated or neglected.

The inhalation of cold air when the body is overheated, or of hot air suddenly after being exposed for some time to a cold air ; or sympathy with the skin when suffering from damp, the most effectual way of applying cold, may cause this inflammation.

The attack is generally ushered in by a feeling of lassitude, pains in the back and limbs, a tendency to cough, oppression in the chest, and occasionally pain, increased by coughing or by making a full inspiration.

Considerable fever attends this disease ; the tongue is coated, the skin is hot and dry, thirst annoys, the breathing is more or less difficult, and the pulse frequent.

As we notice in cold affecting the head that the nostrils are at first dry, the natural secretion being arrested, we find the same effect produced by inflammation of the mucous membrane of the air tubes.

The cough, therefore, is at first dry, and in this stage the difficulty of breathing and oppression are very great. After the third day the

secretion of mucus, which is generally viscid and glutinous, commences, and the cough is said to "loosen," the expectoration becoming more abundant and pus-like, and the suffering decreases.

Treatment.—Owing to the great sympathy between the skin and the mucous membrane, nothing has a better effect in checking inflammation of the bronchial tubes than a hot bath at 102° Fahr. continued for half an hour or longer, unless faintness forbids. After the bath the patient should be well dried and go to bed, which he should not attempt to leave until he recovers.

At this stage an emetic of ipecacuan has great influence on the air tubes, and thirty grains mixed in a cup of water should be given immediately after the bath, half at first, and a tablespoonful of the remainder every ten minutes, until it acts; and vomiting should be encouraged by drinking lukewarm water, so as to empty the stomach.

One hour after the emetic ceases to act, ten grains of Dover's powder should be given, in syrup or treacle, to cause perspiration, which should be encouraged by placing the patient between blankets and not sheets, and by causing him to drink warm toast-water one hour after the powder, lest it should excite nausea. But if opium disagrees with the patient, let three grains of hyosciamus be given in place of it to allay pain; these doses being intended for adults.

A large mustard plaster should also be applied over the chest, and kept on so as to make the skin red; and this should be repeated every eight hours till the inflammation is subdued, and if attended to it will prevent the necessity for a fly blister.

To unload the biliary ducts, half a grain of podophylline and two grains of aloes should be given, in a little syrup or treacle, as soon after the Dover's powder as the stomach will bear it, say two hours afterwards; and if it does not act next morning it should be assisted by half an ounce of Epsom salts.

The hot bath, the emetic of ipecacuan, and the Dover's powder should be repeated every evening, and followed by the dose of podophylline, four or five nights in succession, unless there be distinct evidence that the inflammation has yielded previous to that; and the mustard plaster cannot be dispensed with.

It is popularly said that we should "feed a cold and starve a fever;" but this advice is seldom applicable in either case. While a person rests in bed very little nourishment is required, and those who wish to cut short a catarrh or cold must remain in bed and live abstemiously, avoiding solid animal food, and restricting themselves

to farinaceous food, as rice, arrowroot, or maizena boiled in water and eaten with milk, or, if preferred, with beef-tea or chicken broth ; and they must abstain from every form of alcoholic drinks.

We know that some robust persons have thrown off a catarrh or cold by taking unusually severe exercise and an additional quantity of stimulants ; but we do not write for such ; they are an exception to the rule, and do not require a physician.

When the expectoration is very abundant or profuse, something to rouse the vital energies may be required ; and for this purpose ammonia is our best aid, as it stimulates without increasing the action of the heart, or inducing inflammation.

Thirty drops of sal volatile may be given in a little water every six or eight hours, or, if preferred, five grains of the carbonate of ammonia, given in syrup or treacle, and followed by a wineglassful of toast-water ; and half a grain of quinine, or if this disagrees, a wineglassful of infusion of chiretta or quassia after breakfast and dinner, are the best means for enabling the constitution to rally.

ELONGATION OF THE UVULA.

This appendage to the soft palate, the office of which is to prevent fluids regurgitating by the nostrils in the act of swallowing, when it is affected by cold or a deranged state of stomach, becomes relaxed and elongated, so that it may extend down to the tongue. When hypertrophied in this manner, it falls back into the throat and irritates the glottis or upper part of the windpipe, causing often sickness at stomach, and a tendency to cough when air is inhaled through the mouth in reading or speaking ; and this cough frequently simulates disease of the larynx.

Treatment.—Astringents carefully applied are generally sufficient to make the uvula contract to its natural size. Nitre or burned alum powdered finely should be applied as a coating to the uvula, night and morning. If this does not succeed, ten grains of nitrate of silver (caustic) dissolved in an ounce of water, should be applied with a camel's-hair brush or feather twice daily. But attention must be paid to the state of the stomach and bowels at the same time.

These means having failed, one-third of the length of the uvula should be cut off by a pair of sharp scissors. This operation is perfectly safe, nor is there any danger of too much blood being lost ; on the contrary, it is desirable that it may bleed freely, to prevent its growth, and a return of the annoyance.

Half of the elongated uvula might be removed with safety, but a third is generally sufficient, and it would be better to repeat the operation, if necessary, afterwards than to cut off too much.

CHRONIC BRONCHITIS.

When an attack of acute inflammation of the mucous membrane of the air tubes has been neglected, or badly treated, the tubes and air cells become thickened, forming chronic catarrh.

This disease is generally met with as one of the infirmities of old age; but the young are also subject to it. Its principal symptoms are difficulty of breathing, requiring frequent efforts to clear the air-passages, troublesome cough, especially in the mornings, and considerable expectoration.

This chronic cough is generally found associated with dyspepsia, and in constitutions debilitated by excess and irregular habits.

Treatment.—Our aim in the management of chronic bronchitis should be to improve the state of the constitution generally.

Such patients are always very susceptible, and suffer injury from any sudden change of temperature. They should therefore avoid exposure to the night air, crowded theatres, and over-heated rooms, and fortify themselves against external impressions, by frequent baths, and especially by sea-bathing in the season.

Opiates to relieve such coughs are not commendable. Squill and ipecacuan are the remedies that are most useful. Twenty grains of ipecacuan, taken as an emetic, at the commencement of any fresh attack, is very serviceable, and a teaspoonful of syrup of squill every night afterwards, alleviates suffering.

Such sufferers cannot be too careful of their food, and should eschew alcoholic stimulants. They should exercise much in the open air, particularly on horseback; and inhaling the fumes of sulphur is serviceable to some.

INFLUENZA.

This disease is generally taken to be a severe form of cold; but it is a fever, caused either by contagion or a peculiar state of the atmosphere.

What this altered condition of the air consists in, which gives rise to this and other epidemic fevers, is yet unknown, and still a subject of mere conjecture.

We know that when the atmosphere is exposed to electrical sparks, it is changed into an odoriferous matter called ozone, which is often

perceptible by our sense of smell, after a thunderstorm ; and some attribute attacks of influenza to the prevalence in the air of this ozone, which, when inhaled, irritates the air-tubes.

It has also been ascertained that in certain localities the air becomes loaded occasionally with animalcules, and to the irritation produced on the mucous membrane of the air-tubes by these, when breathed, others ascribe the recurrent attacks of influenza that we experience.

All that is yet known with certainty on this subject is, that so many persons are often attacked in different places on the same day and at the same hour, that the one could not possibly be infected by the other ; and that, consequently, the first cause of influenza must be considered atmospheric. But we see, again, that those affected with it frequently carry it to other places formerly free from this disease, proving that it is, secondarily, contagious, or capable of being communicated from one human being to another.

It generally prevails in spring in Great Britain ; but in Australia it occurs at all periods of the year, especially after heavy rain which had been preceded by a severe drought. Still every such fall of rain does not bring an attack of influenza, and therefore we cannot take as a cause that which is only followed occasionally by the effect.

It is noticed that persons who are seized by influenza, on the first attack in any district, suffer more severely than those attacked at a later period, whether they be strong or delicate, lean or robust ; and this leaves the impression that the poison which inflicts the disease is more virulent at first and becomes milder afterwards. In the acute form, it seldom continues active for more than a month or six weeks in the same district, by which time the inhabitants seem to become proof against it ; but strangers who come as visitors to the place are frequently seized with it at a later period.

Influenza is distinguished from common cold by the depressing effect it produces on both body and mind, and by the fever that accompanies it, which is indicated by the quickened pulse, coated tongue, chilliness and dryness of the surface, pains in the back and limbs, and general feeling of discomfort. It is also a striking characteristic feature of influenza that it affects the membrane that lines, internally, the hollow bones that form the eyebrows ; the pain of which is often agonising.

Treatment.—When taken with influenza, the best plan is to submit at once, and go to bed. Some robust persons who have attempted to “walk it off,” as they termed it, have had relapses for weeks in

succession, have lost more time, and have seriously injured their constitutions.

Depleting measures, either by the use of the lancet or leeches, are not serviceable in this or any other epidemic disease. Our object should be to alleviate pain, and husband the vital powers. For this purpose a warm bath at 100° Fahr. has a good effect, by relaxing the skin, and disposing to the surface. The time to remain in the bath must be regulated by the feelings of the patient, and an hour is not too long, unless faintness supervenes.

When dried after the bath the patient should go to bed, drink freely of toast, barley, or rice water, and abstain from alcoholic stimulants. The food for the first three days should be farinaceous, as tea and dry toast morning and evening, and rice, arrowroot, or maizena, boiled in water and eaten with milk, for dinner.

The pain of forehead and face should be alleviated by the constant, or at least frequent, application of a thin sponge, or piece of flannel, wrung out of hot water, which is always pleasurable. And to soothe pain, induce sleep, and excite perspiration, six grains of Dover's powder should be taken, in syrup or treacle, for the first three nights, at bedtime—unless opiates disagree with the patient, or the age forbids their use.

Drastic purgatives are not required, but the bowels should be regulated by two grains of aloes and ten grains of Epsom salts, for an adult, given in syrup or treacle, each night if required; half that dose being sufficient for a child of twelve years.

The stomach always suffers in attacks of influenza, as is indicated by want of appetite and, with some, nausea; so that gross feeding, during the first three days, is highly injurious, prolongs the attack, and aggravates the suffering.

After the third day, light nourishing food is required, and beef or mutton tea, or chicken broth, can be given for a day or two, with stale bread or rice. Solid animal food should not be used until the tongue has cleaned, and then a lightly-boiled egg for breakfast, and roast fowl or white fish for dinner, is the best to begin with.

To enable the stomach to digest beef or mutton a tonic is necessary; and half a grain of quinine, or a wineglassful of infusion of chiretta or quassia, should be taken after breakfast and dinner, as soon as the patient begins to eat animal food.

When tonics are not taken to assist the constitution to rally after an attack of influenza, neuralgic affections of the head and face often annoy for months in succession. Frontal headache is a frequent

consequence of this neglect; and we find it commencing generally in the forenoon with some, but with others in the evenings. For this affection quinine is a specific or sovereign remedy; and five grains should be given, in a little syrup or treacle, about half an hour before the usual period of attack. And this dose should be repeated at the same hour for three or four days in succession, to interrupt or break the habit, and prevent a recurrence of the attack.

With some persons, who have weak chests or impaired constitutions, the air tubes of the lungs become affected simultaneously with the head and throat. Such determinations to the chest are very insidious, and always dangerous, often proving fatal to the infirm or the aged.

As soon, therefore, as the cough becomes troublesome and the breathing oppressed, a large mustard plaster should be put on the chest, for half an hour or longer, till it makes the surface red; and be repeated every eight hours till the symptoms abate. In addition to this, ten grains of Dover's powder should be given every night, and the vital powers should be stimulated by ammonia, which seems to act as an antidote to the poison of this disease. Thirty drops of sal volatile in a wineglassful of water, or three grains of the carbonate of ammonia, should be given every six or eight hours, until the disease is subdued.

Convalescence is always improved and recovery established by the use of the shower bath, tepid at first, and cooled down gradually, especially if this can be aided by change of air.

HOOPING COUGH.

This is another of the epidemic diseases caused by atmospheric influence, in the first instance, and capable of being communicated afterwards from one person to another by contact.

It is one of those diseases to which we are subject once only during life; exceptions to this general rule being rarely met with, although some few cases have been recorded.

It is also a disease of childhood and of youth; but persons at an advanced age, who may not have had it when young, are still subject to it.

It commences with the usual symptoms of common catarrh or cold, affecting the mucous membrane of the throat and larynx; but there is more dryness of the skin, and the child is feverish and depressed. Still the symptoms, at first, are seldom so well marked as to enable us to recognise the disease with certainty, unless there

be children in the same family or neighbourhood suffering from hooping-cough. And to be able to decide respecting this disease at an early period is a matter of grave importance, as much depends on the management of the first stage of this as well as other fevers.

This period of doubt and suspense varies very much in different cases, and cannot be terminated until the characteristic hoop commences, the spasmodic nature of which is perfectly assuring. But the peculiar hoop which has given a name to this disease, and which alone can distinguish it, may not appear for some days, or perhaps weeks.

When the disease is fairly established, the child coughs rapidly and violently, two or three times, till all the air is expelled from the lungs, and then an effort to inhale through the spasmodically contracted glottis causes the hoop, which when heard once is so peculiar that it can scarcely be mistaken again. Indeed, it is so remarkable that mothers are often alarmed by this hoop, and think the child is suffocating; while, on the contrary, the hoop proclaims that the spasm has relaxed, and that the little sufferer is safe at present.

As is the rule in all attacks of inflammation of the mucous membrane, the natural secretion is at first arrested; and during the first stage of hooping-cough the mucus is scanty and very difficult to remove, which causes the child great pain, and such a feeling of suffocation that it clings to any one near it, or holds by any object for support. Still the effort to cough must be repeated until the mucus is thrown off, which is generally followed by sickness of stomach. And after this is over the child seems relieved, regains his spirits, is ready to take more food, or to return to his playmates and former amusement.

But this spasmodic cough is very exhausting, and when it recurs at short intervals is very trying to weak constitutions, and if complicated with a determination to the lungs or the brain, it may prove fatal.

In this, as in most other diseases of a feverish character, there are nightly exacerbations; and young children require a careful nurse, who will raise them up to prevent suffocation during an attack.

The depressing tendency of this disease, and the knowledge that it must take a course, which—although much may be done to moderate it—cannot be cut short, should be sufficient to dissuade us from depleting measures, either by leeches or otherwise. To husband the strength and allay irritation should be our aim and care.

Treatment.—During the first stage the child should be kept within doors, being warmly clothed and protected from exposure to cold, especially the night air, until the fever abates, which may be from two to six weeks, according to the severity of the attack.

Some parents and nurses, having heard that change of air is good for whooping-cough,—which it decidedly is in the last stage of the disease,—do a great deal of mischief by taking children out in the first stage, and exposing them to changes of temperature while the fever is upon them and the hoop severe. On the contrary, the child should be kept as quiet as possible, and when ventilation, which is always essentially necessary, requires removal to another room, it should be to one with the temperature not below 60° Fahr.

If the spasms be severe and the cough frequent, a bath at 98° Fahr. for ten minutes every night while the fever continues is very salutary. Some are afraid lest this should weaken the child, while, on the contrary, it strengthens it, by increasing the action of the skin, and enabling it to do its part in throwing off the disease ; while it allays irritability, and causes better nights.

With proper care little medicine is required, unless the bowels are torpid, and if so they should be regulated by one grain of aloes and five grains of Epsom salts, given in syrup or treacle at night, as often as required.

During the first stage the child's food should be milk only, if it be below two years of age ; if older, it should be rice, arrowroot, maizena, or sago, boiled in water and eaten with a little milk ; not giving the same constantly, but changing from one to the other, unless the child has a dislike to one ; and its drink should be toast-, barley-, or rice-water, or two-milk whey.

To stimulate the vital powers, and to act also as an antidote to the poison of this disease, ammonia is invaluable. Five drops of sal volatile should be given to an infant of one year old, and ten drops to one of two or three years, in a little milk and water ; or one grain of carbonate of ammonia to a child of one year, and two grains to a child of two or three years, in syrup or treacle, followed by a little toast-water, every six or eight hours. The dose for an adult being thirty drops of sal volatile, or five grains of the carbonate of ammonia in a wineglassful of toast-water.

For alleviating the cough and spasm of the glottis (or valve of the air-tube), the medicine I place most confidence in is syrup of squill combined with hydrocyanic acid. Ten drops of the syrup of squill with one-fourth drop of hydrocyanic acid for an infant of one year

old, and twenty drops of the syrup with half a drop of the acid for a child of two or three years, to be given in a little water every night and morning, lessen the frequency of the cough and the severity of the spasms. The squill has a decided influence on the air-tubes, and the hydrocyanic acid moderates the spasmodic part of this disease more than any other remedy that I have tried. Some parents are afraid to give hydrocyanic or prussic acid to children; but my experience convinces me that, in these doses, it is perfectly safe, and that for spasms of the air-tubes we have no remedy equal to it.

The next best remedy for alleviating the cough and moderating the fever is ipecacuan, of which five grains for an infant of one year, and ten grains for a child of two or three years, should be mixed in a wineglassful of tepid water, and of this a dessertspoonful should be given every ten minutes, until vomiting is provoked. And this mild emetic may be repeated with advantage every second or third evening during the continuance of the inflammatory stage.

While medicine is used to allay the irritability of the air-tubes and the severity of the spasms, we must not forget that these can be renewed and kept up for any length of time by exposure to cold, by improper feeding, and by irritability of temper. A fit of crying is sure to be followed by one of coughing, and a loaded stomach is always certain to produce a bad night's rest.

If properly treated at the commencement of whooping-cough, a child may be perfectly recovered from the disease in six weeks; while under bad management or unfavourable circumstances, it may suffer for as many months.

All the fatal cases that occurred in my practice were attributable to one of three causes—determination to the lungs, causing congestion or inflammation of these; or to the head, producing inflammation of the brain; or to the bowels, inducing diarrhoea or dysentery.

The lungs are the most apt to suffer, and if the cough becomes more troublesome and the breathing oppressed, such symptoms are very unfavourable and alarming. To divert to the surface and relieve the lungs, a mustard plaster, folded in muslin, should at once be applied to the chest, and kept on ten or fifteen minutes, so as to make the skin red; but not to blister, for blisters with such children punish unnecessarily, and in some cases form ulcers that will not heal. The mustard poultice should, however, be repeated every six hours, until the breathing is relieved. Dover's powder,

—half a grain for an infant of one year, and an additional grain for every year up to three years, and then an additional grain for every three years, so as not to give more than six grains to a child of twelve years or upwards,—in a little syrup or treacle at night, increases the benefit of the mustard plaster, and relieves the lungs, by exciting perspiration.

If the child rolls its head, or if, being more advanced in years, it complains of headache, we have reason to consider that the brain suffers ; and if pain of head be accompanied with a tendency to contraction of the fingers or toes, this is indicative of the approach of fits, which too frequently prove fatal.

To relieve the head, half a grain of ipecacuan for a child of one year, and one grain for a child of two years or more, should be given in a little syrup or treacle, every eight hours, alternately with the syrup of squill and hydrocyanic acid, as directed above ; so that one be taken every four hours, till the head symptoms are improved.

The safety both of the lungs and the brain, requires that the bowels be freely acted on by one grain of aloes and five grains of Epsom salts, in syrup or treacle, given every night, or oftener, if required.

Diarrhoea, when it supervenes, is a troublesome accompaniment, and should be attended to early. When taken in time it generally yields to two drachms of precipitated chalk in an ounce of water, of which the child should get a teaspoonful every eight hours, together with half a grain of Dover's powder, for an infant of one year, increased in proportion to age, up to twelve years, and given in syrup or treacle every night, till lax abates.

After the fever abates and the expectoration becomes free, with little spasmodic hoop or effort, the food should be more liberal, giving a larger quantity of milk to children under two years, and beef or mutton tea, or chicken broth, with boiled rice or arrowroot, to those from two to four years, and lightly-boiled eggs, roast fowl, or white fish, with stale bread or light vegetables, for children more advanced in years ; but only at regular hours, lest the stomach be irritated.

In some cases, after the fever abates the expectoration becomes profuse, the tongue moist and flabby, and the stomach so irritable that it will not retain food, which is constantly thrown off immediately after it is taken. For this relaxed state of the stomach and mucous membrane of the air-tubes, alum is occasionally serviceable. Twenty grains of it should be dissolved in two ounces (four table-

spoonfuls) of water, and of this half a teaspoonful may be given to a child one year old, and a teaspoonful to one of two or more years, every eight hours, till the stomach improves.

In tedious recoveries cod-liver oil has a good effect, and half a teaspoonful, increased gradually to a dessertspoonful, may be given after food, morning and evening, unless it disagrees with the stomach and bowels. Some are more improved by two to five drops, according to age, of the solution of the perchloride of iron, in a little milk or water, twice a day, after food.

When convalescent, nothing has so great an influence in removing the cough, bracing the constitution, and preventing a relapse, as change of air, especially sea air, if the season be favourable for removing to the coast. Sponging the body with water, or a shower-bath, tepid at first, and cooled down gradually, is also very salutary, and it prepares the patient for the benefit of sea-bathing.

QUINSY, OR INFLAMMATION OF THE TONSILS.

This disease is a frequent result of exposure to cold, or wet, which is the most injurious form of cold. It commences with pain at the root of the tongue, on one or both sides, increased by any attempt to swallow, together with a feeling of coldness, amounting sometimes to a rigor, or shivering fit, and followed generally by considerable feverishness, and excited pulse.

When the inflammation is confined to the mucous membrane only, it always terminates favourably in a few days; but when it penetrates to the substance of the gland, suppuration is commonly the consequence; while the salivary glands, soft palate, and the uvula generally, sympathize, and soon become involved.

In such cases the suffering becomes very great, the tonsils get enlarged and swollen to such an extent as to meet frequently in the centre; deglutition is exceedingly painful and difficult; the frequent attempts to swallow the increased secretion of saliva render it impossible for the patient to get any sleep; and this torture may be prolonged for a number of days.

Treatment.—After suppuration has commenced, our applications, whether they be external or internal, are of little benefit; but in the first stage of this attack we can generally cut short this very troublesome malady, which it is the more important to accomplish, because one attack in youth leaves a tendency in these glands to become similarly affected again, up to the age of fifty years.

When any young person, therefore, complains of soreness of throat or difficulty of swallowing, after having been exposed to cold, or getting wet feet, a hot bath at 102° Fahr. should be taken for half an hour or longer unless faintness supervenes, and then, being thoroughly dried, the person should be covered in bed with an additional blanket. After the bath an emetic should be administered—thirty grains of ipecacuan mixed in a cup of tepid water, half to be taken at once, and a tablespoonful of the remainder every ten minutes until it produces vomiting, which should be encouraged by drinking freely of tepid water, after each effort to vomit, until the stomach is perfectly cleared out.

As soon as the action of the emetic ceases, the neck should be encircled with a mustard poultice, folded in muslin, kept on twenty minutes or half an hour, until the skin is perfectly red, and repeated every six or eight hours while pain is felt in swallowing; and the patient should take a dose of Epsom salts, from half to one ounce, according to age, taking care to guard against cold when the salt acts.

By such means, aided by a little powdered nitre, applied with the finger occasionally to the affected tonsils, to relieve the vessels by increasing the flow of saliva, the attack may be cut short, and much suffering averted and escaped from. To ensure this it is, however, necessary that the person shall abstain from animal food, drink nothing stronger than toast- or rice-water, and submit to remain in bed for a day or two, to allow the injured parts to recover perfectly. Many, feeling free from pain, and confident in their own strength, have adopted the opposite course; and by exposing themselves too soon to the influence of excitement and the action of the open air, have incurred much suffering that might have been avoided, and imperilled their lives.

It is true this disease does not generally prove fatal, but occasionally it does so. One fatal case occurred in my practice. The patient was a robust young man, about eighteen years old. He paid no attention to the attack for some days after it set in, and when I saw him first suppuration was fairly established. The neighbouring parts were so much inflamed that the mouth could be opened only a very little; while there was so much swelling externally that an abscess threatened on one side, under the jaw. To encourage the matter to come to the surface, a blister was applied over the tumour under the jaw, and the bowels being relieved by an enema, as medicine could not be swallowed, the patient was placed in a sitting position, being

supported by a bed-chair. When visited on the third evening after I took charge of the case, he said he felt easier ; his pulse was quieter ; there was no difficulty of breathing to indicate that the inflammation had extended to the air-tube, nor any other symptom of a fatal issue impending. But the want of sleep for four or five nights previously had overpowered him, and towards morning he persuaded the nurse to remove the bed-chair, that he might lie down. In that position he soon fell asleep, and the attendant, thinking all was well, went also to sleep ; and when I visited him, early next morning, he was dead. No *post-mortem* examination would be allowed in this case, and the only reasonable conjecture was, that the abscess had burst internally, and, lying on his back, which should always be guarded against, he had been suffocated by the discharge of the matter, obstructing the air-tube.

We have already stated that applications, either internal or external, can avail us little, unless inflammation of the tonsils be checked before suppuration is established. If this be allowed to occur, an abscess will form, and its contents must escape, either externally or internally, ere the disease can be cured. Except to attract an abscess to the surface, blisters do not benefit the sufferer, and poultices around the neck add only to the patient's discomfort.

Gargles so frequently prescribed are useful only so far as they assist in removing the thickened mucus from the mouth, or, as it is popularly termed, "cut the phlegm"; but they have no healing influence on the tonsils, with which they could not come in contact, unless they were swallowed.

A mouthful of lemon-juice diluted with water, or cream-of-tartar-water, does all that can be done by gargling ; and nitre dissolved in water, so as to make it tartish, has also the same good effect.

After an attack of quinsy the tonsils generally remain enlarged, and to prevent this, the patient should take the iodide of potassium in one or two-grain doses, according to age, in a wineglassful of water, after breakfast and dinner ; and if the tonsils be painted every morning with a camel's-hair pencil dipped in the tincture of iodine, it increases the effect, and hastens improvement.

Children of a scrofulous constitution, prone to glandular enlargements, often have the tonsils so much swollen by chronic disease that they can scarcely articulate sounds, or speak distinctly. For these the iodide of potassium, and painting with the tincture of iodine, is an invaluable remedy.

If the enlargement in either case be very great, it may be neces-

sary to excise a portion of the tonsils ; but this operation should not be attempted by one unacquainted with the anatomy of the parts, lest the internal carotid artery, which is situated behind the tonsil, be wounded. And some fatal cases of this kind are on record.

INFLAMMATION OF THE MOUTH.

This is generally a disease of childhood. The mucous membrane of the mouth, especially that covering the gums of infants, becomes red and tender, making the child very fretful, and unwilling to suck, if it has a breast, and still more difficult to manage, if it be brought up by hand or fed artificially.

This inflammation denotes a bad state of the blood, and in every case seems attributable to want of proper care and gross feeding.

If it be on the breast, the infant has been allowed to suck too often, so as not to permit the process of digestion to be properly performed ; or if reared by hand, the food has been so gross that the infant stomach could not reduce it to chyme ; or the food has been given in such quantities that much of it has passed from the stomach in a crude state, unfit to produce chyle, or form healthy blood for the constitution.

It is difficult to convince mothers and nurses that it is an established fact, that children are much more frequently injured by over-feeding than by getting too little. Nor do many mothers like to be told that they are destroying their children by stuffing or cramming them, and thus forming a hotbed for inflammation, to foster and render incurable the fevers that their little ones are subject to, and can scarcely escape during childhood.

In Australia the children of the working classes in particular are so indulged in the use of animal food too gross for their tender years, that when attacked with any severe illness they have little chance to recover. Hence the mortality among children is much greater than should occur in so genial a climate.

Treatment.—The first thing to be done for inflammation of the mouth in childhood, is to attend to the state of the stomach and bowels, and when these are put in proper order the disease soon yields to the action of the chlorate of potash. If the child's bowels are relaxed, two drachms of precipitated chalk should be mixed with three tablespoonfuls of water, and one drachm of tincture of catechu, and of this mixture the child should get a teaspoonful, made palatable with a little lump sugar, and given every six hours till diarrhoea abates ; and then less frequently until it ceases.

If the child's bowels are costive, one grain of aloes and five grains of Epsom salts should be given, in a little syrup or treacle, every morning till the bowels act freely, and repeated afterwards when required.

The food meanwhile should be breast milk only, if the child be suckled; or if weaned, and below two years, it should have milk and water, or fluid farinaceous food, taken from the bottle and tube, in moderate quantity, and not oftener than every three hours.

To improve the state of the blood, five grains of the chlorate of potash should be given in a little sugar and water every six hours; and as a local application, the gums should be brushed morning and evening with a camel's-hair pencil dipped in a solution of borax, made with twenty grains to the ounce of water.

DESTRUCTIVE INFLAMMATION OF THE MOUTH, CALLED CANCER ORIS.

This species of inflammation generally appears at a more advanced period in childhood, and often assumes an aggravated character, eating away the gums, so that the teeth become loose, and frequently eating a hole through the cheek.

When the disease seizes on the cheek, this form of attack is indicated by a red circle, having a hard base, appearing on the cheek, while the surface on the inside, when examined, is found coated with a whitish or yellowish deposit. The child is feverish, and its very aspect gives evidence of general constitutional derangement.

Treatment.—In such cases we find the digestive powers entirely prostrated, the child having been fed improperly, and suffering at the same time from the influence of bad air; while its stomach is so weak and irritable, that it is difficult to get it to bear any nourishment. Something in a fluid state is all that is admissible, and beef tea, mutton tea, and chicken broth, given alternately with milk, in moderate quantities every three hours, afford to us the most promising means of supporting such patients.

Solid animal food should not be attempted till the tongue cleans, and gives evidence that the stomach can digest food; and then ground rice or arrowroot, boiled in water and eaten with a little milk, may be given, and when farther recovered a lightly-boiled egg can be added daily; but solid animal food must be withheld for a time, until convalescence is fully established.

To improve the state of the blood, ten grains of the chlorate of

potash should be given in a wineglassful of sugar and water three times a day, shortly after food, until the tongue cleans and the appetite improves; and then it should be given in half a wineglassful of infusion of chiretta or quassia, after food, thrice a day.

As a local application, the ulcer on the inside of the cheek should be brushed with a camel's-hair pencil, dipped in a saturated solution (as much as water will dissolve) of bluestone (the sulphate of copper); and the gums with a solution of borax, twenty grains to the ounce of water. Change of air in such cases is very beneficial.

This ulcerative inflammation of the mouth, when neglected, always terminates badly; and when the ulcers begin to heal, the cheeks may adhere or grow to the gums, or the mouth may contract, so as to efface the appearance of the lips, and leave only a small round hole in the centre. Two cases of this kind occurred in my practice.

When in charge of a dispensary in the north of Ireland in 1832, a young boy, of about fourteen years of age, consulted me on account of contraction of this kind, which had been gradually increasing from the time he had cancrum oris seven years previously. His mouth had a very singular appearance. There were no lips, and all that remained to represent the mouth was a round aperture, just sufficient to admit a quill, through which he sucked fluid food and drink. By a free incision the adhering lips were divided, so as to make an opening quite as large as the natural mouth; and the edges of the wound, until it healed, were kept apart by pledgets of surgeon's lint, except during the hours for taking food.

This operation promised at first to be successful, but the tendency to contract soon manifested itself again, and the following year a second operation was required, as the poor lad was again reduced to the necessity of living on fluids.

At the second operation I excised a portion of the false growth, and carried the incision a little further than at first; and, being aware that any metallic substance would repel the unnecessary growths, commonly called proud flesh, better than a pledget, as used at first, I got a form made of tin, which should have been silver, but the dispensary could not afford it; and this form, large enough to fill the mouth, was worn, especially at night, for some months, and had the desired effect of preventing contraction.

My second case was one of adhesion of the cheeks to the gums and teeth, producing locked jaw, which had continued for two years.

In 1841, shortly after I arrived in Sydney, I was consulted respect-

ing a boy of about twelve years of age, whose jaws were perfectly locked by adhesion of the cheeks to the gums and teeth. The lips, in his case, were in their natural state; but the adhesion of the cheeks was so perfect on both sides, from the angle of the mouth, opposite the eye-teeth, back to the extremity of the jawbones, that he also had to be nourished by fluids, sucked through the space left by an absent tooth.

The family had emigrated from Derry, in the north of Ireland, and left with the child in this state, because he was thought too weak to bear an operation; and when they arrived in Australia the surgeons who were consulted declined to operate.

As the lad was tall, thin, and emaciated, it was evident that fluid food was not sufficient to nourish the constitution, and nothing could be gained by deferring the operation; and as the parents were anxious to be relieved from suspense and anxiety on his account, I agreed to operate.

Chloroform had not then been introduced, and the patient being of the nervous temperament, weak and very sensitive, the operation was hard to bear, because the false growths that had penetrated between the interstices of the teeth, when cut across, as usual bled very freely. This rendered it necessary to operate piecemeal, and husband the patient's strength, by stopping the loss of blood with a pledget of surgeon's lint, and intermitting for a day or two till his strength had rallied.

The position of the artery from the carotid, that passes over the under jaw to supply the muscles of the face, rendered cutting in the dark hazardous, and made it the more necessary to spare loss of blood, lest a branch of this artery being wounded, the patient in his then weak state might not be able to bear the hæmorrhage.

The angle of the jaw on both sides was, however, arrived at with perfect safety, and the muscular fibres that bound the teeth together being divided, the jaws were unlocked after a bondage of two years, and the mouth opened, wide enough for every natural purpose.

As raw surfaces heal much better in contact with metal than anything they can adhere to, plates of thin tin with folded edges were introduced on both sides of the mouth, to prevent the cheeks adhering again to the gums and teeth; and in two weeks the lad could eat, speak distinctly, and enjoy life.

Now this tedious, hazardous, and painful operation, with all the privation and suffering inflicted on the patient by the disease, might have been avoided by proper attention to food and drink at the

commencement of the attack, together with the internal use of ten grains of the chlorate of potash, given in a little sugar and water, three times a day, and brushing the inflamed surface with a camel's-hair pencil, dipped in a solution of borax, twenty grains to the ounce of water, night and morning. In bad cases change of air is also a necessary part of the treatment, and in every such case it is highly advisable.

THE CROUP.

Of this disease there are two kinds, the spasmodic croup, and the inflammatory.

They both cause great difficulty of breathing, are accompanied with a crowing kind of cough, and are therefore somewhat similar in their symptoms; but they vary very much in their manner of attack, and also in their tendency; for while the former is transient and seldom fatal, the latter is much more formidable, and often intractable.

* SPASMODIC CROUP

commences suddenly, and is always traceable to reflex nervous action, caused by sympathy with an overloaded stomach or deranged state of the bowels, especially while children are getting their teeth. This reflex nervous action causes spasms of the glottis, or valve covering the air-tubes, so severe as to threaten suffocation.

Without any previous fever, or appearance of ill health, a child that has eaten heartily and been lively and playful during the day is suddenly taken in the evening or early at night with restlessness, difficulty of breathing, and a crowing noise when the child coughs, or when full inspiration is attempted, indicating spasmodic croup.

Treatment.—The best means to adopt for spasmodic attacks of this character, is to put the child into a warm bath of 98° or 100° Fahr., the former heat being preferable at first, lest the child be frightened by it, and the temperature should be raised two degrees afterwards, while the child is in the bath. The child should remain in the bath fifteen or twenty minutes, or longer, till the spasm abates, and then, being well dried, it should be clothed with flannel, and put into bed. This done, ten grains of ipecacuan, mixed in a wineglassful of tepid water, should be given in tablespoonful doses every ten minutes till vomiting commences, and then tepid water only should be given, to clear the stomach out perfectly.

If the child's bowels are relaxed, rest after the emetic may do all that is necessary, but if costiveness prevails, one grain of powdered aloes, with five grains of Epsom salts, should be given in syrup or treacle, and repeated when necessary.

A fatal case of spasmodic croup has not occurred to me, but it would be hasty to assert that it might not happen, as any means that deprives the lungs of air might destroy life.

We know, however, that relapses are common, and unless great care is taken in the feeding and management of the child, the spasms may recur the next night, or after a longer interval, and if often repeated may induce inflammatory croup.

To prevent this, the child, if below two years, should be fed with milk or milk and water only; and if older, it should have ground rice, sago, or arrowroot, boiled in water, and eaten with a little milk; but animal food is not admissible. It should be warmly clothed, and exposure to cold or draughts of air should be avoided.

If the child is teething, the gums should be carefully examined, and if distended by approaching teeth, the lancet should be applied and the inflamed gums freely scarified.

Should the attack return, in despite of these means, the warm bath and emetic must be repeated; and, in addition to the means directed above, change of air is very advisable, selecting, if possible, a locality that is sheltered from cold winds.

INFLAMMATORY CROUP.

This kind of croup is distinguished from the former by its setting in more slowly, being generally preceded by cough and other symptoms of cold, and accompanied also with fever. The crowing sound in breathing is most perceptible always at night, but although less marked during the day, still it is present, especially when the child coughs; while it is so peculiar in its tone, that when heard once there is no difficulty in recognising it again.

This form of attack is always alarming and dangerous, because when inflammation seizes upon the larynx, a coating of coagulable lymph is thrown out upon its lining membrane; and it depends upon the extent or thickness of this layer whether space be left for air to pass through, or whether the tube be perfectly blocked up.

Treatment.—For this formidable disease powerful remedies are often applied. Some prescribe calomel in large doses; some order tartar emetic in similar doses, and others combine both these

medicines; while blisters are also applied to the throat. These means failing, tracheotomy is performed, by cutting the air-tube and introducing a silver canula, below the inflamed part, for the child to breathe through.

Long experience has convinced me that milder treatment is more eligible and more successful. These medicines cannot remove the lymph that has been thrown out, while they reduce the strength of the little sufferer so much that the constitution cannot hold out long enough to perform a natural cure; which is frequently accomplished by a distinct layer of this false membrane being detached from the air-tube and thrown off by coughing, at the expiration of some weeks from the commencement of the attack. The aid of surgery, to be serviceable in croup, must be applied early; and, as parents are always averse and opposed to such operations in good time, the result is seldom favourable—once, perhaps, in a hundred cases.

The treatment that I prefer is a warm bath at 100° Fahr. for fifteen or twenty minutes, and then an emetic of ten grains of ipecacuan mixed in a wineglassful of water, and given in divided portions till vomiting is provoked, together with flannel clothing and strict confinement to bed, until the child is perfectly recovered; the room being kept at an equable temperature, not below 60° Fahr., and likewise regularly well aired and free from draughts.

After the emetic ceases to operate, a mustard poultice, folded in muslin, should be put round the throat and neck, for ten, fifteen, or twenty minutes, until the skin is made red; and this should be repeated every eight hours, so as to dispose to the surface. In the intervals when the mustard is off, the child's neck should be covered with a piece of flannel lined with silk, to soothe and keep up the temperature.

The biliary ducts should be relieved, and the bowels acted on, by one-eighth grain of podophylline for a child of three years, and one-sixth grain for a child of five years, combined with five grains of Epsom salts, given in syrup or treacle, every night for three nights, and followed by half a teaspoonful of Epsom salts next morning, unless the bowels act freely. If podophylline be not at hand, one grain of calomel may be substituted for it, and given with one grain of aloes, in like manner.

The warm bath should also be repeated every evening for the first three, and the mustard poultice to the neck as often as the skin will bear it. After the third day the bowels should be kept acting by one grain of aloes and five grains of Epsom salts, given in syrup or treacle every night, or every second night, as required.

To prevent the accumulation of the lymph, or false membrane in the air-tube, five grains of nitre in half a wineglassful of warm water, made palatable with sugar, should be given every four hours ; and fifteen drops of the acetate of ammonia, in half a glassful of sugar and water, should also be given every four hours ; these medicines being given alternately, so that one shall be taken every two hours.

The acetate of ammonia is easily prepared by half filling a small phial with vinegar, and putting into this the solid carbonate of ammonia, gradually, until effervescence ceases, when it is fit for use. And in my practice the nitre and acetate of ammonia were more serviceable than calomel and tartar emetic, which are severe, and injure the constitution.

Of the two latter medicines tartar emetic is the preferable for those who like heroic remedies. It should be given in small doses, one-eighth of a grain every ten minutes, till vomiting is excited, and then every hour, to keep up a feeling of nausea, till the inflammation abates ; and afterwards every two hours, to prevent a relapse.

In critical cases like croup, much depends on good nursing and management. The food should be entirely farinaceous,—ground rice, sago, or arrowroot, boiled in water, and eaten with a little milk ; the drink should be toast- or rice-water, or two-milk whey, but curds should not be given. And solid animal food, craved for by most children, should not be brought into their sight, being quite inadmissible.

When the fever leaves, which is shown by the skin being cool and moist, the face pallid, the cough easy, and the crowing sounds having ceased, then a little chicken broth, or mutton or beef tea, may be given with boiled rice once a day. But solid animal food must not be allowed hastily, and great care must be taken to protect the child from exposure to cold, and from exerting itself too soon. And to convince of the danger of the latter, I give an example.

A very fine little girl, an only child, and the only female I recollect to have treated for croup, as it seldom attacks this sex, had been under my care for about a fortnight ; the fever had gone off, the crowing sound had ceased during the day, and at night was scarcely perceptible, but there remained some little difficulty in breathing that caused me to wish the child to keep her bed for a few days longer. An urgent call to see another patient at some distance prevented me from visiting this little girl on the fifteenth day till after noon, when I found her in the drawing-room, trundling an apple on the carpet, and delighting her mamma by her good spirits. I remonstrated against

this exertion, and requested the child should be put to bed again, which being agreed to, I proceeded to visit another patient. A messenger followed me, however, begging me to return, because the child had fallen in a faint. After I left, the child importuned its mamma to allow it to roll the apple a little longer, and, when running to lift it, she fell lifeless on the floor, all attempts to resuscitate being of no avail.

An examination after death would not be permitted, and the immediate cause of death remains unknown, or subject of conjecture. In the case of this child, tartar emetic had such a depressing effect that I treated her with calomel principally ; but my confidence in its power to prevent the effusion of coagulable lymph, and the formation of fibrinous clots, was so shaken by this and other cases, that latterly I seldom prescribed it, and never for either of these purposes.

THE STOMACH.

THIS being the great producer of our life's blood, on the supply and purity of which depend not only our health and happiness, but also our existence, we shall take it first in our notice of the internal organs of the body.

The stomach is situated in the left side, partly under and below the false ribs, and immediately beneath the transverse muscle, called the diaphragm, which separates the chest from the abdomen.

This very important part of the human frame is a large muscular bag, lined with mucous membrane, and furnished with two openings, one to receive the food conveyed to it from the mouth by the tube called the *oesophagus*, and another opening, called the cardiac opening, for conveying the food into the upper portion of the bowel, called the *duodenum*.

This organ is exceedingly sensitive, being supplied by a special nerve from the brain, by branches of nerves from the spinal marrow, and also by branches from the solar plexus of the great sympathetic nerve, situated behind the cardiac orifice of the stomach, so that it is justly considered to be the great centre of susceptibility.

Hence the reason why disease of every kind is so much influenced by our food and drink. And hence it is that dyspeptics whose stomachs are constantly irritated by acid, undigested food, and whose systems are provided with bad blood, are rendered incapable of enjoying the pleasures of society or the beauties of creation.

The stomach is furnished also with a number of small glands for secreting a fluid called the gastric juice, which is acid in character, and which alone has the power of converting food into chyme or blood in the first stage of its formation.

The gastric juice varies very much in quantity in different individuals. With some it seems so abundant that they can eat at will and digest readily, the quantity of gastric juice secreted by such robust persons being estimated at about four pints or pounds weight daily. With others, again, the quantity secreted is small or scanty, and they are obliged to eat sparingly, having great difficulty in digesting a full meal of animal or any other kind of food.

But to enable the stomach to digest properly, the food must be well masticated by the teeth, and combined with the fluid from the salivary glands, which is an important and necessary aid to the gastric juice in the process of assimilation or digestion. So much depends on this that those who gulp their food, or eat hastily, or who waste the saliva by the pernicious use of tobacco, weaken the digestive powers, and thus gradually undermine their constitutions by robbing them of the great requisite for either health or happiness—the formation of good blood.

That the gastric juice is the chief solvent of our food has been fully ascertained; but difference of opinion exists as to the exciting cause by which it is secreted. Some think that the distension of the stomach by food opens the pores in the mucous membrane, and allows the gastric juice to exude; while others attribute its flow to the natural desire for food, as a luscious morsel causes the flow of saliva in the mouth, or as a sympathetic feeling induces the falling tear.

This question seems, however, to have been decided by the experiments performed by Dr. Beaumont on the young Canadian, whose gunshot wound, penetrating the stomach, healed with an aperture into this organ, and allowing the process of digestion to be accurately examined while the food remained in the stomach.

Dr. Beaumont found that gastric juice was secreted only when food was in the stomach, or when it was excited by the presence of some solid substance introduced into its cavity. He observed also that by the muscular contractions of the stomach the gastric juice was mingled with the food until reduced to chyme, and fit to be sent forward to the duodenum, or the first portion of the bowel.

In the duodenum the chyme has added to it the bile coming from the liver, and the fluid secreted by the pancreas, called the sweetbread in animals.

This juice of the pancreas, although less in quantity (equal to about one-eighth of the gastric juice), is found to be a much more powerful solvent than the latter, and by its action, aided by the bile, the chyme from the stomach is separated into two parts, one called chyle, a whitish fluid, fit to be taken up by the absorbents to renew the blood ; and the other the excrementitious portion, to be carried off by the bowels.

This process of digestion, naturally so simple and so perfect, is liable to be interrupted by many causes, which are the source of most of our maladies ; and the stomach is so frequently abused and ill-treated that it is subject to many diseases.

DYSPEPSIA, OR DIFFICULT DIGESTION.

This diseased state of stomach, suffered from by so many, is so Proteus-like in its forms, so varied in its alliances, and described by patients in such different terms, that it is exceedingly difficult to give anything like a full or satisfactory description of its causes and symptoms ; for in addition to the circumstances which act immediately on the stomach itself, dyspepsia is often produced by complication, from sympathy, with other diseased organs, as the liver, the spleen, the pancreas, the bowels, or the kidneys.

Some dyspeptics never feel a natural appetite or desire for food. They eat because it is the usual hour for taking food, and because they know that nourishment is necessary to support the constitution ; but notwithstanding their want of appetite, when they commence they can dispose of as much food as healthy people do.

Such patients suffer, however, after meal, from a feeling of distension and oppression. With some, pain commences immediately after food is taken, while with others it may be two or three hours after ; and then the feeling of discomfort continues as long as the food remains in the stomach ; so that such persons never know the pleasure of eating and drinking, and are never so happy as when the stomach is empty.

Still dyspeptics of this class are constantly exposed to the danger of eating too much, because the same relaxed state of stomach that failed to give them an appetite for food continues equally inactive, and by remaining passive, neglects to tell them when they have taken enough for their weak stomachs to contract on.

Such individuals should eat by measure or by weight, and never allow themselves to be tempted to take a morsel more than the quan-

tity experience has taught them that they are able to digest. They should also eat at regular hours only, avoiding pieces, and recollecting that no burden is so heavy as an overloaded stomach, and that it is only the portion of food which is well digested that can contribute anything to the support of the constitution ; while every morsel in excess of that tends greatly to depress and enervate both the body and the mind.

Other dyspeptics are affected in a manner the opposite of this. They have a good appetite, and relish their food, but cannot bear an empty stomach. About three hours after meal, when the first stage of digestion is about to be completed, they have an unnatural craving for food, which, if not satisfied, makes them quite sick ; so that when travelling or engaged in business they require always to carry with them a biscuit or something that is eatable. The extreme of this frequent desire for food, when indulged, produces gluttony or bulimia.

With some persons any excess, in either eating or drinking, is not only followed by pain of stomach, but also with intense headache, giddiness, and dimness of sight ; while with others the stomach is so accommodating, and so little disposed to murmur or resent injuries, that they eat and drink at will without any immediate feeling of discomfort.

But the law of retributive justice, although it may be tardy in being executed, is still certain to inflict the penalty on those who by unnecessary indulgence in eating and drinking injure their digestive powers, and by forming bad blood, poison their constitutions.

Such persons may escape the usual forfeit for a time, and be envied as boon companions, but at some period they are sure to learn, through reflex action of the nervous system, that injury has been done to that important organ, the stomach.

This information may be communicated, perhaps, by an attack of gout in the great toe, or *tic-douloureux* in the face ; by a severe pain in the heel, or impaired vision ; by a burning sensation in the soles of the feet, or on the top of the head ; by neuralgic pains at the nape of the neck, or rheumatism of the joints ; by excruciating pain seated about the centre of the spine, or lancinating apparently through the brain ; or by enlarged heart, or overgrown liver, and consequent dropsical effusion.

But the more immediate symptoms of dyspepsia are heartburn and water-brash, accompanied with acid eructations and flatulent distension of stomach ; while it is necessary to recollect, eructation

of wind may be the result of habit, air being swallowed, and again thrown off; but flatulence in the bowels must be caused by dyspepsia, the food having been too long retained in the stomach, and having produced consequent fermentation, and the formation of gas.

HEARTBURN, OR CARDIALGIA.

This disease is caused by indigestible food remaining too long in the stomach, and giving off carbonic acid gas, which is always inimical to digestion.

After meal, some two, three, or more hours, the patient feels oppressed, disinclined to make any exertion, and has an unpleasant feeling of distension at the pit of the stomach, followed generally by eructations frequently so acid as to set the teeth on edge.

Such suffering is very common with persons who have injured their stomachs by alcoholic fluids, ale, porter, wine, or spirits; by drinking too much strong tea or coffee; by the use of tobacco in some form; by irregular hours for meals, either eating too often, so that the process of digestion can never be completed without being interrupted by the introduction of fresh food, or fasting too long, so that the stomach is weakened and unfitted for digesting a full meal; by too much bodily fatigue, lowering the bodily powers; by anxiety of mind, which is particularly unfavourable to digestion; by excessive study, accompanied with sedentary habits; by frequent constipation of the bowels; or by the use of food unsuitable for that particular stomach, or unpalatable to the individual.

The powers of digestion vary very much in different persons, so that no amount of experience can enable us, without previous acquaintance, to prescribe with certainty for all patients.

Milk, the natural nourishment provided by the Almighty for the young of all the mammalia, cannot be digested well by some infants, and disagrees also with many adults.

A lightly-boiled egg, so nutritive and easily assimilated by some, even delicate persons, if eaten at breakfast by others, although perfectly robust, would unfit them for exercise during the entire day.

White fish, although prescribed often for invalids as being less heating than beef or mutton, do not suit many persons in perfect health, and oysters, reckoned a delicacy by some, are highly injurious to others; and onion, a component part of all our famous sauces, is intolerable to a few. These peculiarities show us that when selecting

food for any patient, idiosyncrasy of taste and stomach should be inquired after and considered.

Parents should not oblige children to eat food that is known to disagree with them, but they must be equally careful not to yield unnecessarily to their caprice or fancies. Nor should the conductors of public boarding-schools be too rigid in requiring children to follow a prescribed regimen or diet, if it causes nausea to the individual.

With all due deference for the high opinion of Dr. Beaumont, who enjoyed an opportunity of testing the powers of the human stomach that has never occurred to others, still I cannot divest myself of the opinion, that our liking for food has much influence on the secretion of the gastric juice of the stomach, and that food eaten with distaste is not likely to be well digested by any one.

Treatment.—Those who suffer from heartburn or indigestion should read carefully the foregoing hints, and endeavour to find out and to remove the cause of their dyspepsia; for although medicine may alleviate the symptoms and pain for the time, yet while the cause continues the effect must follow, and the suffering recur.

Dyspeptics should avoid soups, and especially broths made with vegetables; nor should they drink much at meals, because much fluid dilutes and weakens the gastric juice, which with them is always scanty.

They should also eat sparingly. The little that is digested well affords nourishment to the constitution; while the fever caused by indigestion weakens the frame, irritates the nervous system, and wastes the muscles. And hence it is that many large eaters are very lean and starved looking.

In the choice of food it is necessary to recollect that, as a general rule, the young of all animals are more difficult to digest than the same animals are when arrived at maturity.

Chicken is more difficult to digest than pullet; lamb than mutton; and veal is much more difficult to assimilate than beef; while none but those who possess stomachs of herculean power should venture to eat barbecue, as the young pig is notorious as a cause of indigestion.

Meat kept till it is tender is much more easily digested than that which is tough, but decomposition is not conducive to digestion; on the contrary, it is opposed to the process of assimilation, and game, venison, or meat of any kind that is "too high" or tainted, must be shunned by dyspeptics.

Good tender bullock beef, or wether mutton, or venison, in

moderate quantity, is the most easily digested animal food, and agrees with the greatest number; but few dyspeptics can digest the fat of meat, and much butter is also injurious to them.

Eggs are very nutritive, and when lightly boiled, not more than three minutes, they can be eaten with safety by most persons, although they are found to disagree with some individuals.

The common fowl, guinea-hen, pigeon, and turkey are not so heating as beef or mutton, and consequently suit those who are subject to flushings of the face, or invalids who are recovering from fever, or inflammatory attacks.

Wild fowl are also nutritive, but not so easily digested as the common fowl. The pheasant, the partridge, the woodcock, the plover, and the lapwing are the greatest favourites with those who are fond of game, but dyspeptics must use them with caution.

Goose and duck are more difficult to digest than fowl, and are not commendable for dyspeptics; and to these may be added the widgeon, the teal, and the wild duck; while the barnacle, and all those that have a fishy flavour, should be avoided.

Rabbit and hare are nutritive, the latter more so than the former; but hare is more difficult to digest than rabbit, being less tender.

Meat that is salted is rendered harder and more difficult to digest, and meat cooked and allowed to become cold is sodden and condensed in fibre, making it more impenetrable to the gastric juice. Nor can it be digested till it is heated in the stomach, because Dr. Beaumont ascertained that the gastric juice does not act at a low temperature.

White fish are tolerably nutritive and digestible, and are often ordered to invalids, because they are less heating than beef or mutton, or any red flesh. The whiting, the sole, the garfish, the flounder, the codfish, and the turbot are the most commendable; but the salmon, the mackerel, the eel, and all oily fish, are difficult to digest.

The lobster and most other shellfish are difficult to digest, and do not suit dyspeptics. Oysters are considered nutritive, and suit some persons, especially consumptive patients, while they disagree with others. They should be eaten raw, as every method of cooking spoils them and makes them indigestible.

Salt is the only condiment which the constitution in a natural state requires, and all others should be withheld from children, and reserved for the decline of life. Salt taken in moderate quantity promotes digestion and improves the blood; but when taken in

excess it makes the blood too thin, and renders the complexion pallid.

Vinegar hastens digestion, and is serviceable to some ; but it does not suit those who suffer from gravel, rheumatism, or gout. Pickles are only receptacles for vinegar, by which the vegetables are rendered hard and indigestible, perfectly unfit for the stomach of the dyspeptic.

Meat that is roasted is more nutritive than that which is boiled, because it retains more of the natural juices, which are extracted by boiling. The manner of cooking has, however, great influence in preserving the nutritive qualities of the meat.

To roast meat properly the fire should be well lighted, and allowed to burn briskly before the meat is put down, so that the outer surface may be quickly crusted, or partially seared. This crust prevents the escape of the internal juices, and when this object has been obtained, the meat should be withdrawn a little from the fire and the heat moderated, so as to allow the inner parts to be thoroughly cooked without burning the surface.

When boiling meat the same principle should be acted on. The water should be boiling perfectly before the meat is put in, so as to allow the surface to be condensed quickly ; and this being accomplished the fire should be lessened, that the inner part of the meat may be cooked properly, without having the outer portion overdone.

Baked meat should be treated in the same manner, the oven being perfectly heated before the meat is put in, and afterwards cooled down, to allow the joint to be roasted through, while at the same time the natural juices are retained.

In making beef or mutton tea or soup, where the object is to extract the virtues of the meat, the opposite plan should be adopted, and the meat should be put into cold water on a slow fire, just sufficient to make it simmer, for some two or three hours.

As a general rule, to which there is scarcely any exception, we may add that meat that is overdone, or cooked a second time, is always injured, and rendered much more difficult to digest.

The possession of canine and molar teeth indicates that human beings are fitted for a mixed diet, and require vegetable as well as animal food. Experience proves also that the stomach and bowels require the stimulus of quantity to enable them to act properly, and that a portion of vegetable is serviceable, by affording the bowels substance to contract upon.

Salads, celery, and all raw vegetables should be avoided by

dyspeptics, because they afford little nourishment, and are apt to become acescent on the stomach. It is true the addition of a little oil and mustard lessens this tendency ; but few delicate stomachs can digest or even tolerate oil.

Lettuce, on account of its anodyne qualities, is the least objectionable, and seems useful to some ; but it, too, is better dispensed with by dyspeptics.

Farinaceous vegetables are the most beneficial. Good wheaten bread, baked without alum,—which bakers add to make their loaf appear white, while it is highly injurious to delicate stomachs,—if well fermented and one day old, suits every one ; but bread newly baked renews its fermentation in the stomach, and is injurious to dyspeptics. Brown bread, as it acts as an aperient, suits some ; but the bran is difficult to digest, and does not serve dyspeptics.

As bread since the days of yore has been considered the staff of life, and, in despite of all the efforts of modern cookery, still retains its ancient prestige, it is important that every family should be prepared to bake their own bread. Aërated bread is preferred by some, but of this I have no experience. It is certain that soda and all baking powders which contain an alkali, are objectionable, because they neutralise the gastric juice. To procure yeast or barm is the only difficulty in the way of making good bread, and for those who may be distant from a brewery I give a form that has been used in my house for some years past.

TO MAKE YEAST AND BREAD.

Put a breakfastcupful of good hops into a saucepan with four quarts of cold water ; let it be boiled slowly for five hours, until it is reduced to three quarts, or four winebottlefuls, and then strain. Allow this decoction to get moderately cool, then add a breakfastcupful of sugar, stir until the sugar is perfectly dissolved, and then bottle the mixture, and cork with good corks for use. After standing in a cool place for three days the yeast will be perfectly formed, and one tablespoonful will be sufficient for every two pounds of flour, which can be baked in the following manner :

Take say twelve pounds of flour, put it into a bowl, and having made a hole in the centre of the flour, add six tablespoonfuls of yeast and two quarts of tepid water ; mix these with the flour, and cover with a coarse cloth for six or eight hours, till it rises. When it has risen, take as much tepid water as will make the whole into dough ; add a tablespoonful of salt, and knead it properly ; cover it

again, and let it stand till it ferments sufficiently, which is known by its cracking on the top ; and then it should be divided into loaves, put into the oven, and be well baked ; but not eaten for twenty-four hours afterwards.

A good mealy potato, cooked by steam, is nutritive and easily digested, but the soft, waxy potato does not suit dyspeptics. The sweet potato in Australia is very nutritive, and when relished, is a good vegetable ; but few emigrants like it, and some never acquire a taste for it.

Rice is a wholesome vegetable, and when well boiled and eaten, as in India, with a little curry, it is easily digested, but when taken without curry it is apt to constipate the bowels.

Cabbage is too gross a vegetable, and too prone to acescency in the stomach, to suit dyspeptics ; but cauliflower is easily digested, as are also French bean, vegetable marrow, asparagus, seakale, artichoke, or turnip, if eaten with a little nutmeg or allspice, or red pepper, to prevent flatulence.

Parsnips are nutritious, and tolerably easily digested ; but carrots and pumpkins are heavy on the stomach, and do not suit dyspeptics.

The common garden pea and bean are nutritious, but difficult to digest, and not suitable for invalids or dyspeptics. Pea-soup also requires a robust stomach, or the bracing effects of sea air, to enable us to assimilate it.

Light puddings, made of rice, either with or without currants, or with flour and custard, are nutritious and easily digested, if eaten alone ; but taken after animal food and vegetables, pudding of any kind overloads the stomach, and cannot be serviceable to dyspeptics or invalids.

Pastry in every form is indigestible, because butter or grease of any kind, when cooked with flour, forms an amalgam that the gastric juice can scarcely act on. Hot buttered toast and rolls are equally objectionable ; nor do macaroni and vermicelli suit dyspeptics.

Butter, when eaten in moderate quantity on cold bread, is nutritious, and generally easily digested, if lately made and lightly salted ; but old, rancid, salted, and cooked butter should be avoided.

Cheese is nutritious, but too difficult to digest to be generally recommended. Its power in preventing flatulence and fermentation has made it a popular addition to fruit after dinner, and to some persons it is both palatable and safe. Like butter, it is greatly injured

by cooking, and toasted cheese or "Welsh rabbit" is very indigestible.

Milk is decidedly the best food for children until they are two years old, unless it disagrees, owing to idiosyncrasy of stomach ; and for invalids it is a valuable article of diet in some cases ; but it seldom suits dyspeptics, particularly phlegmatic and bilious persons, or those whose stomachs have been injured by ale, porter, wine, or spirits.

Milk, when boiled with farinaceous substances, as flour, arrowroot, oatmeal, rice, or maizena, is rendered more indigestible ; and consequently blanchmange, thought by many particularly light, does not suit those who have weak stomachs.

Dyspeptics should never eat fruit after dinner, as at that hour it overloads the stomach, causes flatulence, and embarrasses the process of digestion. If taken before breakfast, or two hours after, it may be serviceable, but at a later hour it is generally injurious ; after supper it is always so to weak stomachs.

Oranges, grapes, peaches, figs, apricots, pears, strawberries, gooseberries, raspberries, currants, and apples are the kinds of fruit most easily digested ; but they should be perfectly ripe and mellow, and not made soft by bruising or decomposition ; and hard apples should be prepared for the stomach by roasting or boiling.

Plums, cherries, and, as a rule, all stoned fruits ; as also cucumbers, melons, and nuts of every kind are difficult to digest, and should be shunned by those who possess weak stomachs.

The banana and pine-apple are nutritious, and in moderate quantity are generally safe ; but they disagree with some dyspeptics.

All dried fruits are indigestible, and preserved fruits are still more so, because for the latter purpose the fruit is generally boiled before it is ripe or fit for use, and although the sugar that is added covers the acidity of the fruit, it does not alter its quality, nor make it suitable for any delicate stomach.

Marmalade and jellies are equally objectionable, and should not be used by dyspeptics.

Animals of every description require drink, or fluid, to enable them to digest solid food, and to supply the waste by perspiration and otherwise. For the brute creation water is sufficient ; and for the human race in their natural state, it is certainly the safest and most generally useful beverage ; but the influence of acquired habits, and the artificial manner in which most of the present generation spend their existence, unfit the stomach for the use of its natural fluid, and require some drink to stimulate the digestive organs, so

as to enable them to keep pace with the bustle and excitement of the age we live in; and to rouse the energy of the system when overpowered by the exhausting effects of the unceasing toil of both body and mind.

Tea, coffee, and cocoa or chocolate are found by experience to fulfil this office better than any other stimulant that has yet been discovered. Other stimulants, of the alcoholic class, are all followed by after depression both of body and mind; but tea is found to have a beneficial effect in retarding the waste of the body, thus preserving and husbanding the general strength; while it exhilarates the spirits and invigorates the mental powers, without causing depression afterwards.

The active principle of tea is called theine, but chemical analysis has shown that it contains also peroxide of iron, soda, and volatile oil, which exert a beneficial influence on both the muscular and nervous systems, and make tea the most grateful and useful beverage for all classes of society.

Like most of the gifts of the Great Donor of all good, it has been abused, and having been taken in excess it has done injury to some constitutions; but used moderately, with a proper proportion of milk or fresh cream and a little sugar, it is a delicious draught, has a genial influence on the feelings, and suits the greater number of dyspeptics.

Good black tea, known as Congou, is the safest and best. Green tea is coloured by being dried on sheets of copper, from which it absorbs verdigris, that is poisonous to the stomach, and very pernicious also to the nervous system.

In preparing tea, as in cooking meat, much depends on proper management. The salutary virtues of tea are extracted readily by water quite boiling; but by a slow decoction we get, in combination with the useful part, the astringent principle that only constipates the bowels, and confers no advantage.

To make good tea the water should be soft; the teapot should be of metal, well heated before the tea is put in; the water should be boiling briskly, and, the heat being retained by a woollen cover for the pot, it should be allowed to infuse for fifteen minutes, when it is perfectly fit for use.

Travellers in the bush in Australia adopt a different plan in making tea. They carry a pint tin attached to their saddles, which tin is called a billy, for making tea, while they have a smaller tin to drink out of. When making tea it is put into this billy with cold water

and sugar, according to the taste of the party, and then the tin is put on a bright wood fire, and allowed to boil for a minute or two, when it is removed from the fire to cool, and let the leaves subside to the bottom of the billy.

Tea made in this manner is not so delicate in flavour as that which has been merely infused in boiling water; but experience convinced me that the tea boiled in a billy is equally refreshing, owing, perhaps, to the sugar fixing and retaining the volatile oil.

Dyspeptics should not indulge in drinking much tea. In moderate quantity, say one breakfastcupful tolerably strong, it can be taken morning and evening with advantage, unless the person suffers from palpitation of the heart, forbidding its use; but taken more frequently, or in larger quantity, it impairs digestion, increases acidity of stomach, and injures the nervous system.

The active principle of coffee is called caffeine, which is very similar to theine; but coffee is more heating than tea, and is not so suitable for invalids, or those who possess weak stomachs.

It is customary to have a cup of coffee after dinner, which, if taken immediately after meal, impedes digestion, but after an interval of two or three hours it may be serviceable. Most dyspeptics, however, fare best when they omit this rule of fashionable life.

Cocoa is less oily, and consequently lighter, than chocolate, to which it is preferable for those who are delicate. It contains a principle somewhat similar to tea and coffee, and suits those to whom tea and coffee are too exciting for their hearts and nervous systems. It should be boiled in water, and rendered palatable by the addition of milk and sugar; but it should not be made too thick, for if so it sits heavy on the stomach, and causes a feeling of oppression.

Still there are nervous habits for which neither tea, coffee, nor cocoa is suitable; and for such individuals it is necessary to provide or suggest some substitute. For this purpose tea made of sage or balm, familiar in our gardens, is tolerably palatable, and very serviceable, some having used either the one or other with advantage for years in succession. The leaves of the coffee tree, either green or dried, produce an infusion said to be milder than the berry, and than tea; but of this I have had no experience. Chicory, which is generally mixed with coffee, if used alone forms also a tolerable substitute, and suits some with whom tea, coffee, and cocoa disagree.

Should some fluid more nourishing than these be required, the invalid may adopt a breakfastcupful of milk and water, with a little

sugar in it, morning and evening; or a cup of beef or mutton tea for breakfast, and milk with water and sugar for tea.

Dyspeptics should not drink immediately before dinner, nor much during meal; but after eating solid food it is necessary to take some fluid, to render the food more soluble by the gastric juice.

Half a tumbler of water is the safest and best drink after dinner, and if thirst prevails afterwards, a wineglassful of water should be taken at intervals of one or two hours; but large draughts of water keep the stomach relaxed, create an unnatural thirst, and invariably injure and retard digestion.


Cold water, or any cold drink, disagrees with some stomachs, and these should have a light infusion of ginger, of cinnamon, of nutmeg, or of cream of tartar, made palatable with a little sugar, the proportion of the acid or the spice being merely sufficient to give flavour to the water, and make it sit lightly on the stomach.

Some argue that dyspeptics and invalids, as well as all delicate persons, require alcoholic drinks, as ale, porter, wine, or brandy, to strengthen them; but this, I am convinced, is a popular error, the creature of fashion, or the offspring of a depraved taste.

Dr. Beaumont ascertained, by his experiments on the wounded Canadian, that alcoholic drinks destroyed the effect of the gastric juice, and impeded the digestion.

If we require any other proof that alcoholic stimulants are not calculated to produce strength, we have it in the fact that they are never given to pugilists who are being trained to fight with an equal in single combat, although this is known to be the greatest trial of endurance that any human being can be exposed to, because every muscle, every nerve is put on the stretch, and must be retained so; as any relaxation, even for a moment, might decide the victory. Yet if any champion were known to have taken alcoholic stimulants during his period of training, no judge would put any confidence in him on that occasion, no matter how great his prowess, how distinguished his science, or how numerous his former victories. Now when we know that alcoholic stimulants are not admissible for such purposes as this, we cannot imagine that they are necessary for the common sustenance of life; unless it is to accommodate or perpetuate a pernicious habit, which the weak, the delicate, and particularly the young, should be guarded against and protected from.

Some assert also that alcoholic drinks are necessary for the human frame, because they supply carbon, and are consequently the best heat-producing agents. But this fallacy has been amply contradicted



by the experience of navigators, who have sailed and resided for a time in the frigid zone, and who found that their men could bear the extreme cold much better when they drank only tea or coffee, than when they were supplied with spirits.

My experience convinces me that alcoholic stimulants are not only unnecessary, but that they are injurious; and in place of giving strength to the weak, that it is only the strong who can withstand their deleterious and enervating effects.

But if persons, influenced either by habit or fashion, must have such stimulants, porter is preferable to ale; and pure wine free from acidity is much safer than that which is dosed with brandy to cover the acidity.

Good claret, hock, or Moselle, are the best for daily use. Burgundy, port, sherry, and the stronger white wines, are too heating or inflammatory, and cause feverishness.

In addition to paying strict attention to their food and drink, those who suffer from heartburn should be careful to take regular exercise in the open air. Motion is evidently the great law of our existence, and a sedentary life is perfectly at variance with this law, and decidedly inimical to the healthy performance of the digestive functions.

The health and soundness of the entire frame depend on constant absorption and renovation; and to facilitate and promote these the body should be exercised daily in the open air.

Invalids are invariably very susceptible of atmospheric changes, and the true way to fortify the constitution against these impressions, is by being much in the open air during each day. The night air is injurious, and unsuitable to invalids and children, particularly about and shortly after sunset, owing to the quantity of dew that falls then, especially in hot climates; nor does it suit them to be exposed to the evaporation from the ground early in the morning.

Walking is a very health-giving exercise, and has great influence in promoting the strength both of body and mind. It is a power that increases greatly by repetition or habit, and many weak persons who on first trial have scarcely been able to walk half a mile, in a few days have been equal to a journey of eight or ten miles. Hence the benefit received by invalids at hydropathic establishments, and at sea-bathing ports.

Exercise on horseback, although not so natural, proves to be equally salutary, and is especially suited for those who are deficient

in muscular power, as the rider, with little effort on his part, can give sufficient motion to all parts of his body.

When sufficient exercise cannot be taken by walking or on the saddle, friction is a valuable substitute. It may be applied by the open hand, by a coarse towel, by flannel, or, better still, by the flesh-brush ; and should be repeated at least morning and evening, having been preceded by a shower-bath, tepid in winter and cold in summer.

Sufficient attention is seldom paid to the necessity for baths, both plunge and shower-baths ; nor do persons generally seem to appreciate fully their salutary effects on the human frame, and the advantage to be derived from them in securing a healthy action of the skin, so necessary to our comfort and wellbeing.

To favour the action of the skin and promote the insensible perspiration from the surface, those subject to heartburn should avoid chills, and be careful to suit their clothing to the temperature of the atmosphere.

Dyspeptics generally require flannel next the skin in winter, and cotton in summer ; but the habit of muffling too much is injurious, nor is it wise to cover one part of the body more heavily than others. If any part feels weak and susceptible of cold, it should be strengthened by friction with a stimulating liniment, as croton oil, spirit of turpentine, or hartshorn.

Although exercise is absolutely necessary to promote health, yet it must not be taken too soon after meal, as rest after eating is indispensable for those who secrete little gastric juice and digest slowly. With such persons the stomach requires all the energies of the system to be centred in it during the first period of digestion. Even the mind itself must be unoccupied, if we wish the process of digestion to be thoroughly perfect.

Fear, anxiety, anger, hate, and every unhallowed passion, are inimical to the assimilation of our food and the formation of good blood ; while the influence of happy faces around the social board is better than condiments, and no doubt gives to human beings a natural zest for society.

Efficient action of the digestive powers requires also rest before meal, for if the body or mind be exhausted by previous labour, it is vain to expect energetic action of the stomach. It, too, suffers from sympathy, and must be recruited by rest for some time to enable it to do its duty.

The same rule, indeed, influences all action, whether nervous or

muscular ; it cannot be continuous, there must be alternations and periods of repose.

The heart itself enjoys its regular although brief naps, and the stomach is no exception to this invariable and universal law.

Hence the sufferings of those who eat too often : like heartless taskmasters they render their slave incapable of doing duty, and are afterwards obliged to wince under the want of a service their stomachs cannot perform, and which they cannot dispense with.

Few persons can eat with benefit oftener than three times a day, with an interval of five hours between each meal, the last being very light.

Some dyspeptics who digest slowly require an interval of six hours between each meal, and a few take seven hours to perfect the process of digestion, and are better nourished by two meals every day, than by eating oftener.

Habit, we know, has great influence over all our actions, and hours for food, once established and found to suit the individual, should be attended to, as deviations from the accustomed period for eating always injure the dyspeptic.

No kind of rest is equal to sleep, which is the great restorer of all our energies ; and the dyspeptic should follow the example of those domestic animals which by instinct retire to rest at an early hour, because sleep taken before midnight is found to be the most refreshing. But those who would escape nightmare must not go to sleep with a full stomach, and should avoid suppers.

Seven hours of sound sleep are sufficient to satisfy the wants of many ; but some require eight hours, and, as a general rule, this is the better number, which cannot be much deviated from by dyspeptics without soon producing an unfavourable impression on the health and happiness of the individual.

As the tongue is always a true index of the state of the stomach, dyspeptics should often consult this monitor, and note its indications. If the tongue be coated in the morning, and a bad taste in the mouth, there is perfect evidence that the stomach has been injured either by the quality or quantity of food or drink taken during the previous day, or else its energies have been impeded, and the process of digestion retarded, by inattention to some of the requisites already alluded to.

Having said so much respecting the necessity for strict attention to diet, drink, exercise in the open air, baths, and friction for the skin, suitable clothing for the body, and requisite rest, for the cure

of heartburn and dyspepsia in all its forms, it is unnecessary to state that without this constant care and attention, little aid need be expected from medicine.

When acid forms in the stomach, causing eructations that set the teeth on edge, it should be neutralised and removed by an alkali, as calcined magnesia, or the bicarbonate of soda or potash, and not allowed to pass down to irritate the bowels.

Calcined magnesia in such cases does a double service, for, by combining with the acid in the stomach, it forms a salt that acts as an aperient on the bowels, and prevents constipation, which generally accompanies and invariably aggravates dyspepsia.

Soda has also an aperient tendency, but not to the same extent, while some prefer it, as being more palatable than magnesia.

The bicarbonate of potash is, however, the best for general use, because magnesia, if it be not neutralised by acid in the stomach, may accumulate in the bowels; and soda, when taken in excess, may produce gravel or stone in the bladder.

As it is impossible to calculate the quantity of acid in the stomach at any time, the dose of alkali should never be large, twenty or thirty grains in half a tumbler of water being enough at once, as it can be repeated afterwards if required.

Alkalies, when taken in excess, consume the gastric juice, increase dyspepsia, irritate the stomach, and aggravate the evil which they were expected to remove.

The better plan of treatment is to anticipate and prevent the formation of acid by increasing the tone of the stomach, and hastening the process of digestion; so that food may not be delayed in the first stage, so as to cause fermentation and consequent acidity.

Pepsine taken in dose of twenty grains immediately after food is a useful tonic for this purpose; and if the stomach does not feel comfortable at the expiration of two or three hours, the same quantity can be repeated.

Bitters are also valuable tonics for dyspeptics, and when taken soon after food they have great influence in preventing acidity; but if deferred till acid has formed, they are of little service. A wine-glassful of infusion of chiretta, quassia, or gentian, made by one drachm (one-eighth ounce) of either to a pint of boiling water, is a sufficient dose, and, if necessary, may be repeated after an interval of two or three hours.

Quinine taken in half or one-grain dose either before or after food has a happy effect with some, but to others it gives headache.

Strychnine being the strongest bitter, is also a powerful tonic, but as the dose must be minute, it cannot be recommended for general use as a family medicine.

For patients of the lymphatic temperament and pallid countenance, iron is a beneficial tonic; and ten grains of the carbonate of iron, in a little syrup or treacle, after breakfast and dinner, or ten drops of the solution of the perchloride of iron, taken through a glass tube, in a wineglassful of water after meal, hasten digestion, and improve the blood by increasing its red globules, which give colour to the countenance.

For dyspeptics who suffer from neuralgic pains or muscular rheumatism, the iodide of potassium, in two-grain doses, taken in a wineglassful of water after breakfast and dinner, is an invaluable medicine for improving the powers of digestion, and for eliminating acidity from the blood, and thus controlling and lessening the irritability of the nervous system. This is, however, an active medicine, not intended to be used every day for life; but it can be taken in these doses with perfect safety twice a day for two or three weeks in succession, and afterwards at intervals of a few weeks, if required.

As stated above, no tonic can serve while the stomach is occupied by acid. This should first be removed by a dose of alkali, and the tonic should be given half an hour or an hour afterwards. Some combine the alkali with the tonic, but this is not always suitable, and seldom palatable. In my experience the effect was better when the medicines were taken separately.

Dyspeptics should always be attentive to the state of the bowels. Constipation is a natural consequence of slow digestion, and, if neglected or allowed to continue, it soon acts upon and aggravates its own origin.

Drastic purgatives, often used to counteract this tendency, rather increase it, and are not commendable; for by over-exciting the bowels they weaken them, and produce torpidity and inaction.

Something so mild as merely to induce a natural motion is what is wanted, and for this purpose two grains of powdered aloes with ten grains of Epsom salts, taken at bedtime, in a little syrup or treacle, will generally act after breakfast next morning. Should it fail to do so, the dose must be repeated every night till the bowels get into the habit of acting daily, after which every second night may be sufficient, or as required.

Aloes in large doses, as ten grains, or if taken alone, is apt to gripe and cause hæmorrhoids or piles, but in small doses, and com-

bined with Epsom salts, it never does so. On the contrary, it relieves and prevents piles, and may be used with safety for a lifetime. I have prescribed it during the last twenty years, even to mothers after their accouchement; for whom I never ordered the usual sickening dose of castor oil, unless they seemed to have been eating too much, and required something to lessen their appetite, and prevent inflammation.

Two grains of aloes, combined with ten of salts, is a sufficient dose for a male adult, and half that is generally sufficient for females and children.

The compound powder of rhubarb, known as Gregory's powder, in doses of thirty grains, acts favourably, and is a safe aperient where there is acidity of stomach; but as rhubarb has an astringent tendency, the dose after some time must be increased perhaps to sixty grains, and a habit of requiring aperient medicine may be induced.

Aloes, if the drug be genuine, never loses its influence, and, no matter how long it may have been used, it creates no unfavourable tendency or habit in the bowels to require an aperient; while experience convinces me of its safety and suitableness as a family medicine, and its general efficiency.

An enema of soap and water, cold in summer and tepid in winter, if thrown up into the bowel shortly after breakfast, has a happy effect in relieving the lower bowel, and by sympathetic action increasing the peristaltic motion in the entire canal, and thus preventing the necessity for the frequent use of aperient medicine.

Those who suffer from heartburn should be attentive to this means of improving their digestion, for by soliciting the bowels to act in this way every day shortly after breakfast, they will soon be brought under the influence of habit, and continue to act, without the application or repetition of such artificial means.

WATERBRASH, TECHNICALLY CALLED PYROSIS.

This form of dyspepsia is different from heartburn, because it is not created by the fermentation of food in the stomach, but occurs in the mornings or evenings, when the stomach is empty, and must therefore be attributed to reflex nervous action.

When attacked with this discharge of fluid from the mouth, patients feel severe pain of stomach, which they call cramp, that causes them to bend forward, in which position they remain until

they vomit or discharge a quantity of fluid, by which act the pain is greatly relieved.

This fluid is frequently acid, indicating that it comes from the stomach, but very often it is tasteless, and, although large in quantity, perhaps above a pint, it seems to be produced principally by the salivary glands. This disease shows a partiality for the female sex, who suffer most frequently from waterbrash, but it does occasionally attack men of a nervous temperament.

In the North of Ireland, where I had charge of a large dispensary for eight years, I saw a good deal of this distressing affection, which was evidently attributable to the want of necessary comforts and the food used by the peasantry, who lived chiefly on potatoes and salted herrings, or on oaten meal, eaten in the form of cakes, or boiled in water and called porridge, or stirabout, few of them enjoying the luxury of milk, while few of them had animal food twice in twelve months.

Treatment.—A little peppermint or cinnamon water taken after meals had a good effect in moderating the attacks with some, while others were more benefited by an infusion of camomile, quassia, or gentian after food, together with an aperient pill to regulate the bowels, which were invariably costive with these patients. Change of diet and attention to regimen, as directed above for the cure of heartburn, could not be complied with, and without these no permanent benefit could be obtained. Of this I am fully convinced by my experience in Australia, where the working classes eat wheaten flour, and have abundance of animal food ; and there waterbrash is so rare that no case of it occurred in my practice. The climate no doubt has also an influence, the heat disposing to the skin, and thus relieving the internal organs.

INFLAMMATION OF THE STOMACH.

An attack of this kind may be caused by cold applied to the external surface of the body, by some corrosive poison taken by the mouth into the stomach, by the abuse of alcoholic stimulants, by swallowing something too hot, or by eating food that is indigestible, or taken in too large a quantity, for gluttony of solids is equally injurious as excess in drinking fluids.

When inflammation of the stomach sets in, the secretion of gastric juice is arrested, and the power of digesting food is held in abeyance, until the mucous membrane of this organ is restored to a healthy state, which is often prolonged to a distant period.

Few seem to be aware, or to reflect sufficiently, that repeated indiscretions on their part, or even a single excess, in either eating or drinking, may subject them to an attack of severe, perhaps fatal, gastric fever, or may produce ulcers of the stomach, which by penetrating through it may destroy life.

Some we know have a natural safety valve in the inverted action of the stomach, which when overloaded rejects its contents ; but this is not the case with unfortunate dyspeptics, whose stomachs, being relaxed, remain passive, and retain what they receive.

Inflammation of the stomach is usually heralded by severe frontal headache, accompanied with a coated tongue, nausea, vomiting, and depression of spirits, which symptoms are soon followed by a severe burning pain at the pit of the stomach, which is exceedingly sensitive when pressed on ; by a sensation of chilliness, in some cases amounting to a rigor, and by dryness of the skin, together with a quick pulse, and considerable fever.

Treatment.—If there be reason to consider that any part of the poison or indigestible food remains in the stomach, which latter may be retained for many hours, thirty grains of ipecacuan, mixed in a teacupful of water, should be given to the patient, half at once, and a tablespoonful of the remainder every ten minutes, till it causes vomiting, which should be encouraged by a breakfastcupful of tepid water after each effort to vomit, until the contents of the stomach have been dislodged. This being accomplished, a large mustard plaster should be applied over the pit of the stomach, and retained there till the skin is perfectly red, say half an hour or longer.

As cold applications have great power in allaying inflammatory action, the patient should swallow a wineglassful of cold water every fifteen or twenty minutes, or what is still better, a small piece of ice, so as to keep the stomach constantly cool ; but large drinks distend the stomach too much, and do not suit the purpose.

The head also should be kept cool by a damp rag, often renewed across the forehead ; and the mustard poultice should be repeated over the pit of the stomach every six hours till pain abates.

If the inflammation of the stomach be, however, the result of a chill by cold applied to the surface, the patient should have a plunge bath at 100° or 102° Fahr., for half an hour or longer, unless faintness supervenes. When removed from the bath and well dried, he should be laid between blankets, and get six grains of Dover's powder in a little syrup or treacle, which dose should be repeated at the expiration of two hours, to excite perspiration ; and this should

be encouraged by drinking freely of warm toast- or barley-water, so as to keep up the perspiration for twelve hours, when the blankets can be exchanged for cotton sheets, but the patient must remain in bed until he recovers.

As soon as perspiration ceases, a mustard plaster, as directed above, should be placed over the pit of the stomach ; and if these means, carefully applied in either form of attack, do not succeed in removing the pain, then leeches, half to one dozen, according to the strength of the patient, should be applied over the pit of the stomach, care being taken to wash the mustard well off, and to smear the surface with sweet cream to make the leeches sit ; and after the leeches cease to bleed, each bite should be covered with a small pellet of folded calico, and the mustard plaster should be repeated every six or eight hours till the inflammation is subdued.

Until then it is improper to give food to the patient, for it is not only unnecessary but also highly injurious ; toast-, barley-, or rice-water, a wineglassful every hour or two hours, is all the nourishment that can serve until the pain abates and the tongue begins to clean ; but after that an equal quantity of milk may be given with the toast-, barley-, or rice-water.

As soon as the tongue cleans and the patient gets an appetite for food, ground rice boiled in water and eaten with a little milk is the most suitable for breakfast ; a cup of chicken broth or beef tea with a little stale bread for dinner ; and arrowroot, prepared as the ground rice, in the evening, in place of tea, which should not be taken till convalescence is established. Solid animal food must not be returned to hastily, and when tried it should be of the lightest kind, a fresh egg or a little roast pullet.

The bowels in such cases are frequently relaxed, which is the safer extreme, but may require to be controlled by a little chalk mixture ; two drachms of precipitated chalk in two ounces of water, of which a teaspoonful should be taken every six or eight hours ; and if this be not sufficient, six grains of Dover's powder should also be taken each night. If the bowels are confined they should be regulated by two grains of aloes and ten grains of Epsom salts, in a little syrup or treacle at night, as required.

VOMITING OF FOOD.

This is a frequent consequence of inflammation of the stomach, when it assumes a low chronic form from being neglected or badly treated.

The person does not suffer from want of appetite, but the stomach is so irritable that it rejects soon after meal the greater portion that has been eaten ; and yet patients may suffer in this way for a considerable time without appearing much emaciated.

This deranged state of stomach is generally one of the symptoms of pregnancy ; but while it may be caused by chronic inflammation of the stomach, it may also depend on other causes, as an obstruction in some part of the bowel, a hernia or rupture, a diseased state of the liver, or inflammation of the brain when children are teething.

Treatment.—As constant thirst is a frequent accompaniment of this affliction, much injury is often done by allowing such patients to take large drinks, which keep up the irritation and vomiting, until weakness and wasting sometimes become extreme. Medicine under such circumstances can have no good effect, because it is not retained long enough to allow it to act ; and no improvement can be obtained without limiting the quantity of drink to a tablespoonful, perhaps, or even to a teaspoonful at short but regular intervals.

The food must also be limited to such portions as the stomach can bear, if that should be only a teaspoonful ; because the quantity thrown off is not only wasted and lost, but it takes with it gastric juice which cannot be spared ; and this, together with the effort to vomit, reduces the constitution and the strength by a double process.

The selection of food in such cases requires great consideration, and although it is not admissible to comply always with the taste of these patients, who often fancy what is most unsuitable for them, yet we must not compel them to take any kind of food to which they have an aversion.

Equal parts of milk and toast-, barley-, or rice-water made palatable with sugar, arrowroot, or ground rice boiled in water, and eaten with a little milk, or chicken broth, beef or mutton tea, with a little stale bread, all in small quantities, are the kinds of food most likely to suit in such cases.

The drink should be toast-, barley-, or rice-water, or rennet whey, always in small quantity.

This chronic form of inflammation of the stomach is often benefited by a flannel bandage, wrung out of cold water, or tepid water if the person be sensitive, put round the waist, covered by another calico bandage to prevent evaporation, and renewed every eight or twelve hours.

Mustard plasters frequently applied over the stomach are also very

serviceable, and are generally preferred, as they can be discontinued without any risk of getting cold or lumbago by leaving them off.

The trisnitrate of bismuth, together with hydrocyanic acid, is an excellent internal remedy for this irritability of stomach. One drachm of the trisnitrate of bismuth, mixed in three tablespoonfuls (one and a half ounces) of water, with twelve minims of hydrocyanic acid, and given in the dose of a teaspoonful after food, twice or thrice a day, has great influence in allaying irritability of stomach, and preventing nausea.

Constipation of the bowels is a general accompaniment, and should be relieved by an enema of soap and water thrown up into the bowel every morning; and if this be not sufficient to cause the bowels to act, two grains of aloes and ten grains of Epsom salts should be taken, in syrup or treacle, every night, or less frequently as may seem necessary.

If disease of liver be the cause of irritability of stomach, that organ should be improved by the means directed in the article on the liver; and if hernia be present, it must be reduced by the means directed for it, or by the hand of the surgeon. In every case the original cause must be removed before a permanent cure can be obtained.

THE BOWELS, OR INTESTINES.

These are a continuation of the stomach, being lined with the same mucous membrane, and furnished with numerous glands for secreting mucus, excreting effete matter, and also for absorbing the chyle formed in the stomach and duodenum, while they form a channel for carrying off excrementitious matter.

The first portion of the bowel next the stomach is called the duodenum, then follows the jejunum and the ilium, which three constitute the small bowel, extending from the stomach to the cæcum. This, the small bowel, is folded upon itself, and measures from twenty to thirty feet, according to the height of the individual, and affords ample space for the absorbents to take up the chyle, to renew the blood, and nourish the constitution.

The large bowel commences with the cæcum, which is situated in the right groin, and is remarkable as being the part at which the contents of the bowel first assume the odour or appearance of fæces, and also as having a valve to prevent fæculent matter regurgitating into the ilium. The colon, proceeding from the cæcum, extends from the groin on the right side up to the margin of the liver, and

then across above the navel to the left side, and thence down to the left groin, where it terminates in the rectum, or straight portion of the bowel, leading to the fundament. The large bowel is not folded upon itself like the smaller bowel, but it forms curves, in which accumulation of fæculent matter is often found, especially at the cæcum in the right groin. Nor is the large bowel equal in length to the small intestine, it being only from two to six feet long, in proportion to the size of the body; but its greater width gives space for lodgments that are often injurious to health, and difficult to remove.

CONSTIPATION.

We have already alluded to the influence that constipation of the bowels has in aggravating dyspepsia, owing to the sympathy which one part of the mucous membrane has with another; and also to the advantage of having the bowels properly regulated, because either extreme is injurious, and opposed to the health of the system.

Drastic purgatives, therefore, should never be used as a family medicine. They stimulate the bowels too much, so that their action is invariably followed by constipation, and consequent depression of spirits, and hæmorrhoids, or fissure in the edge of the fundament, caused by the strain necessary to pass hardened masses.

Health requires that the bowels should be relieved once a day, as a general rule; and those who eat heartily and digest well, go usually twice a day; while dyspeptics seldom have the bowels to act oftener than every second day; but this should be the extreme limit, which can seldom be exceeded without producing baneful results. Because, in addition to the fæculent portion of the food that is eaten, the constitution requires to throw out by the bowels all the effete matter secreted by the liver, and by the excretory glands seated in the mucous membrane of the bowels, that we noticed were similar to the perspiratory glands of the skin, whose good services in either case cannot be dispensed with.

When the bowels do not act naturally an enema of soap and water, cold in summer and tepid in winter, thrown up into the bowel shortly after breakfast, has a very happy effect.

For this purpose a six or eight-ounce metallic syringe is very convenient, and should be part of the furniture of every dressing-room. One full of it is sufficient, and any person can use it without assistance, as it is easily introduced if the point be lubricated with a little soap or oil. It is peculiarly adapted for persons of business, and for all

who have engagements to attend to it is invaluable, because it enables them to ensure the action of the bowels before business hour, or when travelling, before the hour of starting.

The common enema apparatus serves the same purpose, but it is more apt to get out of order.

Every lady's dressing-room should have one of these instruments, and the use of it when required should be considered a necessary part of her toilette, and absolutely requisite for perfect cleanliness.

It is true that a small enema acts on the lower bowel only, but its influence by sympathy extends much farther, and excites the peristaltic motion of the entire canal, and when persevered with at a certain hour daily, it induces a natural habit of action and relief at that time.

Should it, however, unload the lower bowel only, by doing so it gives a certain means of preventing hæmorrhoids, or piles, and has been proved to be one of the best remedies for this harassing disease.

In addition to the enema, many persons require occasionally a mild aperient, and, as a family medicine, I can with confidence recommend two grains of aloes and ten grains of Epsom salts, to be taken in syrup or treacle, or in two pills, at bed-time. If the bowels be obstinate and do not yield to this dose, taken two nights in succession, then a tablespoonful of castor-oil should be given next day, two hours after breakfast. But the impression cannot be too strongly inculcated, that moderate action of the bowels is all that health requires, and that purging should never be had recourse to, except for the purpose of removing disease, or controlling inflammation.

Food easily digested and suited to the individual, together with the means advised in the article on dyspepsia, will enable most persons to dispense with aperient medicine.

COLIC, OR CRAMPS OF THE BOWEL.

This spasmodic attack, which takes its name from the colon, or large bowel that it affects, is distinguished from inflammation by the pain returning in paroxysms, and being relieved by pressure.

It may be caused by flatulence, arising from indigestion, by indurated fæces obstructing the colon, by inflammation and consequent

obstruction of the small bowel, which often sets in insidiously, or by the poison of lead affecting the constitution, as occurs to painters, or those who use water from leaden pipes or cisterns.

Treatment.—When colic arises from flatulence it is easily removed by a cup of warm ginger tea, made palatable with sugar, or five grains of Cayenne pepper in a wineglassful of sugar and water, together with a turpentine stupe, by sprinkling turpentine on flannel wrung out of hot water.

When it is caused by obstruction of the bowels, it is generally accompanied with vomiting, so that it is difficult to get medicine to remain on the stomach, or to get the bowels to act, by reason of the spasm. To remove this is the first object, both for the relief of the patient and to promote recovery ; and a large anodyne must be given, sixty drops of laudanum to a man, and forty to a woman, on a piece of sugar, to be followed, as soon as the stomach is quieted, by half an ounce of castor-oil, and an equal quantity of turpentine, the bowels being constantly fomented with flannels wrung out of hot water. And if the bowels do not act in six hours, two drops of croton oil, on a piece of sugar, should be given every six hours till the bowels yield. Until this is effected the patient must not drink more than a tablespoonful of toast-water, occasionally, to moisten his mouth, else the vomiting will continue, and, by inverting the action of the bowel, defeat our object.

When colic arises from the poison of lead in the system, it is distinguished by the slate-coloured line along the edge of the gums, which is characteristic of this affection. To remove the lead from the constitution after the bowels have been acted on, the patient should take three grains of the iodide of potassium in a wineglassful of water, after food, thrice a day. And in every case the action of the bowels must be kept up for some time by a repetition of the castor-oil and turpentine.

The food should be farinaceous, until convalescence is fully established.

DIARRHŒA, OR LAX.

This disease is a frequent result of constipation, owing to the bowels having been irritated by the accumulation or lodgment of indurated fæcal matter, in some part of the colon.

It may also be caused by undigested food, as unripe fruit or pork, passing through the small bowel ; or by eating too much fruit in hot weather, causing the liver to secrete a redundancy of bile ; an

attack of which is generally accompanied with spasms of the colon or large bowel, and frequently of the legs ; constituting what is called English Cholera.

Diarrhoea may also be caused by wet feet, or cold applied to the surface of the body, owing to the marked sympathy between the skin and the mucous membrane ; just similar to what we observe in catarrh of the air tubes.

Great mental excitement, as extreme fear, violent passion, or severe grief, may cause diarrhoea.

It may also be the result of weakness of the constitution, and a relaxed state of the bowel itself, as occurs in the last stage of consumption.

And it frequently supervenes at the termination of fevers, being one of the means by which nature, or the constitution, throws off the disease.

In diarrhoea the stools or dejections are too frequent and also fluid ; and there may be pain in the lower bowel, called tenesmus, causing a disposition to sit too long, and to strain ; but there is no blood in the dejections, and it is further distinguished from dysentery by the absence of that peculiar fœtor which in the latter disease always indicates an inflamed or ulcerated state of the mucous membrane, in some portion of the bowel.

Treatment.—By simple diarrhoea or purging, nature is often doing only what is necessary to carry off something that would be injurious if retained. This is markedly the case with children when teething, for whom diarrhoea is often an invaluable safety valve ; nor is it less salutary occasionally for adults, who by excess in eating or drinking have overloaded the constitution.

It is not judicious, therefore, to be too hasty in giving astringents to check diarrhoea, unless it be continued too long, to weaken the constitution, and produce injury by too much straining.

We should recollect, however, that if it be neglected too long it may become chronic, starving the constitution by constant waste, and inducing a morbid habit and diseased state of bowels, which is occasionally very obstinate, or even incurable.

When taken in proper time, attention to food, drink and management, will often do all that is necessary to cure diarrhoea. Solid animal food is not admissible while the bowels are relaxed ; broths and soups are equally injurious, and large drinks of any fluid are very pernicious.

A breakfastcupful of equal parts of milk and lime water, or, if

this be not convenient, plain water with a little lump sugar—taken three, or at most four, times during the day, as food for an adult, and less according to age; and a wineglassful of toast-water or rennet whey, if thirst annoys, as the only drink, given once between the intervals, together with rest in bed, and sufficient blankets to keep up gentle perspiration, have cured many. But much depends on position, as even in the sitting posture the weight is thrown upon the lower bowel, and by this means the irritation is kept up and the diarrhœa continued.

If the case has been neglected for some time, and acidity of stomach prevails, a stronger alkali than lime water is required, together with an astringent; and a mixture should be made of half an ounce of precipitated chalk; four ounces (eight tablespoonfuls) of water; two drachms of tincture of catechu; and one drachm of tincture of opium (laudanum); of which a male adult should take a dessertspoonful, before food, thrice a day, till the lax abates, and then night and morning till it ceases. Sugar or syrup may be added to this mixture, but it keeps better without it, especially in hot weather. Of this astringent mixture a teaspoonful would be a sufficient dose for a youth of twelve years, and half that quantity for a child of four years.

While the diarrhœa continues the food should be entirely farinaceous; a cup of tea with dry toast morning and evening, and ground rice, or arrowroot, or maizena, boiled in water, and eaten with a little milk for dinner; while drink should be limited to a wineglassful of water or mild fluid as above.

To relieve pain of the lower bowel, and prevent straining, nothing has so good an effect as twenty drops of laudanum for an adult, mixed in a dessertspoonful of sweet oil or milk, and thrown up into the bowel by a half-ounce syringe. This should be applied after a motion, and repeated every eight hours, till diarrhœa abates, and then at night only. But any large quantity of starch or other vehicle used with laudanum for this purpose distends the bowel too much, causes irritation, and is consequently rejected, without benefiting.

When spasms of the bowels and cramps of the legs accompany the diarrhœa, there is evidence that some indigestible substance requires to be removed from the bowels; and then a tablespoonful of castor oil with twenty drops of laudanum in it should be given to an adult. To aid this, the bowels and legs should be rubbed well with oil of turpentine; and if this does not remove the spasms in six hours, the

castor oil and laudanum should be repeated, and friction with the turpentine continued.

During convalescence great care is necessary, lest a relapse occur by exposure to cold, or by improper food or drink. Solid animal food must be tried cautiously, and it is generally necessary to continue the astringent chalk mixture, once or twice a day, till the bowels become regular.

DYSENTERY.

This affection of the bowels generally commences with diarrhœa, so that the dejections at first are too frequent, and contain liquid fœcal matter, with perhaps a little blood. But when the disease is fully established the motions consist of mucus mingled with blood, without fœcal matter, and are accompanied with that distinctive odour which is characteristic of inflammation or ulceration of the mucous membrane of the bowel.

In diarrhœa the mucous membrane of the bowel is congested and relaxed. In dysentery the mucous membrane is inflamed or ulcerated, the discharges contain no fœculent matter, but are very offensive in smell, and the tenesmus or desire to strain is much greater.

Dysentery may be caused by a sudden check to the perspiration, by damp or cold applied to the surface, by stimulating indigestible food, by the immoderate use of fruit, by atmospheric influences, by bad air from cesspools or foul drains poisoning the blood, or by contagion, as in hospitals, or other crowded places. And hence the necessity for removing and burying the dejections immediately after they are passed, to prevent the air of the apartment being vitiated, and the disease communicated by this means.

This disease is most frequent in summer, and is very prevalent in hot climates, in which it often assumes an epidemic character, and proves fatal to many who are attacked by it.

It is attended with considerable fever, often of a low type; and is greatly to be dreaded when it seizes upon mothers after their accouchement, who are too often carried off by it.

When neglected in the early stage, it frequently assumes a chronic form, which is exceedingly unmanageable. Of this I saw many instances in the cases of gold diggers in Australia, who having injured their stomachs and bowels by the use of ardent spirits, and being greatly reduced by the effects of the disease, increased by the want of necessary comforts and care in proper time, came into hos-

pital in such a lamentable state, that, although they often lingered for some months, yet the ulcers of the bowels never healed, and the issue was generally fatal.

It is always a dangerous disease, requiring prompt treatment, and the greatest attention, especially when numbers are crowded together, as has been experienced in different parts of the world.

During the Peninsular war, when the army was under the command of the Duke of Wellington, it was very destructive to the troops; and in India it carried off a distinguished Christian, and brave soldier, Sir Henry Havelock.

Dysentery does not always commence with diarrhoea, as mentioned above. On the contrary, it is often ushered in suddenly, by a rigor or shivering fit, severe pain of bowels, and considerable fever.

In this disease the liver is invariably congested, and its functions deranged from the very commencement of the attack; and the skin, sympathising with the inflamed state of the bowel, feels dry and harsh, without any natural perspiration.

Treatment.—Like most diseases, dysentery may be rendered mild or the opposite, by proper treatment or neglect, at the commencement.

When first taken with it, the patient should have a warm bath at 102° Fahr., and remain in it for half an hour, the temperature being kept up. When well dried, he should be laid between blankets, and take ten grains of Dover's powder (the compound powder of opium), in a little syrup or treacle, to cause perspiration. A large mustard cataplasm should also be applied over the bowels, which, by changing its position occasionally, can be kept on an hour or longer; and as soon as perspiration commences, it should be encouraged by drinking freely of warm toast- or rice-water.

Next morning the damp blankets should be removed and replaced by well-aired sheets; and if there be pain on pressure over any part of the bowels, at either groin or near the umbilicus or navel, leeches, from half to a dozen, according to the strength of the patient, should be applied over the seat of pain; care being taken to wash the mustard well off, and to smear the surface with fresh cream, to encourage the leeches to sit; and after bleeding ceases, the mustard plaster should be repeated, the bites being covered with a bit of folded linen.

To relieve the tenesmus or griping, nothing is more efficient than twenty minims or twenty-five drops of laudanum for an adult, mixed with a dessertspoonful of sweet milk or oil, and thrown up into the

bowel by a half-ounce syringe; and this should be repeated after a motion, every eight or twelve hours, till pain abates; and then less frequently.

The drink should be toast-, barley-, or rice-water, in moderate quantities; and the food should be very light, arrowroot or ground rice, boiled in water, and eaten with a little milk; and the patient must not attempt to sit up, or leave his bed, until convalescence is perfectly established.

Many practitioners give calomel and opium to check the inflammation, but I place no confidence in them. I have seen calomel do much mischief by salivating the patient; and opium does not serve, unless it be combined with ipecacuan, so as to encourage perspiration.

Some think it necessary to bleed largely from the arm, but I cannot coincide with them. Local bleeding by leeches or by cupping is more serviceable. But the leeches, and also the mustard plasters, should be repeated every day, until pain on pressure over the bowel is removed.

It is necessary to recollect that no real improvement has been made until fæcal matter appears in the dejections. This is often passed in indurated lumps, and in large quantity; which has led to the fatal mistake made by giving drastic purgatives to empty the bowels, before the inflammation has been subdued. Croton oil, colocynth, and large doses of aloes, given while inflammation is present, add fuel to the flame, and in place of promoting or hastening the recovery, may induce a fatal result. But frequent injections of rice- or barley-water, or any thin gruel, strained, do great service, by softening these indurated masses, and thus favouring their transit, while they soothe the bowel, and allay inflammation.

Powerful astringents, as sulphate of iron, copperas, or sugar of lead, and tannic acid, given often to check the hæmorrhage or loss of blood, are also injurious; by increasing constipation, and retarding the passage of indurated fæcal matter, which, by lodging in the bowel, keeps up the inflammation, and causes the hæmorrhage.

When it is ascertained, by pressure near both groins, and across the bowels above the navel, that the inflammation has subsided, then, but not sooner, a tablespoonful of castor oil, with ten drops of laudanum in it, to prevent griping, may be given and repeated every morning or second day, till the bowels are emptied.

The liver in such cases always sympathises with the impeded action of the bowels, and requires to be stimulated. For this pur-

pose half a grain of podophylline may be given, with ten grains of Epsom salts, in a little syrup or treacle, at night, in place of the castor oil in the morning. The podophylline does all that blue pill or calomel can do, while it is free from the objections to which they are open. Given with a little salts, it acts mildly, and does not gripe.

As soon as the bowels have been unloaded and relieved, the diet should be a little more generous, and a cup of chicken broth, or beef or mutton tea, with a little stale bread, or, if preferred, a lightly-boiled egg, may be eaten once a day; and if this is borne well, in the course of a few days a little roast-fowl can be tried; but the return to solid food must be very gradual, and not adopted without due consideration.

Sponging the body with tepid water night and morning for a day or two, and then using a shower bath, tepid at first and cooled down gradually, together with plenty of friction to the skin, prepare the ticonstitution for exposure to the open air, and moderate exercise.

CHOLERA MORBUS, OR ASIATIC CHOLERA.

This is one of the epidemic diseases of which the origin or cause is yet unknown. Some attribute it to the presence of ozone in the air, and others ascribe it to the influence of myriads of animalcules in the atmosphere.

The suddenness of its attack, and the number seized at the same time, and at the same place, give sufficient evidence that in the first instance its origin must be atmospheric; while so many cases have been recorded of persons from a diseased district having carried it to a locality previously healthy, that we are forced to conclude that it is secondarily capable of being communicated by contagion.

It sometimes commences with diarrhoea, which may continue for some days before any marked symptoms of cholera supervene. In other cases it begins with nausea and purging, at first of fæcal matter, and afterwards of fluid more like rice-water than human dejections. Or the patient may have neither nausea nor purging at first, but suffer only from intense spasms of the bowels and limbs. The worst forms of this disease are, however, those in which collapse, or coldness of the surface, loss of pulse, sinking of the features, and blueness of skin, appear without purging or cramp. Such cases often prove fatal in two hours.

It prevailed for a time in the district where I had charge of a dispensary, in Ireland, in 1832.

On the same night eight families, who lived on an elevated ridge of land about half a mile from the river Bann, were seized with cholera, all about the same hour, midnight.

They were all small farmers, residing in a neighbourhood that had formerly been particularly healthy. The greater number were males, but having lost my notes of these cases, I cannot state the proportions of the sexes.

Being ignorant of the nature of the disease, and my residence being some two miles distant, they did not send for medical assistance until morning; about six hours after the attack.

Having seen a good deal of cholera in the hospital in Edinburgh in the spring of that year, and afterwards, during the summer, in Belfast, Ireland, where I was visiting surgeon for the northern district of the city, I had no difficulty in recognising the disease by the reports brought by the messengers, and I went prepared with medicine.

The first patient was a strong man, screaming from the violence of the spasms or cramps in his bowels, thighs, and legs; while his tongue had the glazy coating peculiar to cholera, and his extremities were exceedingly cold. To this man I gave, at once, one drachm of tincture of opium, one drachm of tincture of cardamoms, and half a drachm of tincture of capsicums in a little warm water; directing a large mustard-plaster to be placed over his bowels, and the limbs to be well rubbed with oil of turpentine under the blankets, which were to be increased, in order to retain heat, and dispose to the surface.

Of the remaining seven patients, some were dead, some were moribund; but all had lost the power of deglutition before I saw them, and became helpless victims to the violence of the disease.

On returning to the first patient, some two hours afterwards, I found the spasms had abated, but not ceased, and I gave half the quantity of anodyne he had before, and directed the mustard to be repeated, and the friction with turpentine continued till pain was relieved, unless the skin should become abraded.

When I saw him that evening he was quite composed; the bowels had been relieved of a large quantity of black fœtid matter; the circulation in the extremities was restored, and he complained only of thirst. To allay this, I ordered twenty grains of nitre in

half a tumbler of toast-water every two hours till thirst abated. He had a good night and recovered in a few days.

Thirty-two cases of well marked cholera, and many of diarrhoea and spasms, occurred in that district at that time; and as my dispensary was in a central position, too far distant for the convenience of some when taken suddenly, I placed medicines at short distances from each other, with directions how they were to be used, till I could see the patient.

My experience in Edinburgh and Belfast had shaken my confidence in calomel as a remedy for cholera, and I did not prescribe it. Anodynes, to allay pain or correct diarrhoea; castor oil, to unload the bowels when requisite; nitre to allay thirst and act on the kidneys; heat, in a dry form, either by heated air, or hot salt put into long narrow bags laid around the person; together with constant friction with turpentine, if spasms prevailed—were the means on which I depended; and except the seven who were first seized, and who got no medicine, all that were attacked in that district recovered.

Since 1832 I have not seen a case of cholera; but after all that has been written on the subject, I would still recommend the same remedies.

OBSTRUCTION OF THE BOWEL.

This is one of the most formidable diseases to which human beings are subject. In many other maladies the efforts of nature, if not obstructed or prevented, would promote recovery; but in this affliction, such efforts seem often to increase rather than to relieve or diminish the difficulty.

Obstruction of the bowel may be caused by spasmodic contraction of the bowel, forcing one portion of it down into another, which is termed Introsusception; or by strangulated hernia, the bowel having escaped out of the abdomen, and the aperture through which it has passed being too small to allow the bowel to act; or by indurated masses, allowed to accumulate in the bowel until it becomes so distended that it loses the power of contracting to expel them.

Young persons, from a feeling of delicacy, or tempted by love of amusement, often neglect the calls of nature in proper time, and when it suits their convenience they find that the bowels will not act; and in place of taking a little aperient medicine they conceal the want of it till it is too late. In such cases the loss of appetite

is the first intimation of their neglect. And this is soon followed by nausea and vomiting, so severe that nothing can be got to remain on the stomach.

Treatment.—Twenty grains of the bicarbonate of potash dissolved in a wineglassful of water for an adult, and half that for a child, corrects the acidity that prevails, and will often reconcile the stomach to bear medicine; especially if aided by a mustard cataplasm placed over the stomach and bowels. If the potash be rejected, and the taste in the mouth is still acid, this or soda in similar quantity should be repeated until the acidity is corrected.

As soon as the stomach is quieted, one ounce of castor oil, with six drops of laudanum in it, to allay irritation, often sits better on the stomach than more drastic purgatives, and should be given first; but drink must not be allowed after the oil, lest the stomach should reject it. The patient should also lie perfectly still in bed for five or six hours, as either talking or moving keeps up the tendency to vomit, and does injury.

Six hours after the oil has been taken, a large enema, from two to four pints, should be thrown up into the bowel. This has a good effect by softening the indurated masses, and should be repeated every two hours till the bowels are relieved. Soap and warm water suit very well; but if the patient be exhausted by want of nourishment, and the bowel will retain the fluid, a double advantage may be attained, by injecting into the bowel either milk, or beef or mutton tea.

If the bowels do not act in twelve hours after the oil has been given, then one or two drops of croton oil, on a small piece of sugar, should be given every four hours, till the bowels act; the large enemata being repeated at regular intervals.

In some obstinate cases, galvanism has succeeded after the most active medicines had failed.

INTUSSUSCEPTION OF THE BOWEL.

This abnormal state of the bowel may be the cause of unyielding obstruction in the intestinal canal. By spasmodic contraction, one portion of the bowel may be forced down into the other, like the finger of a glove pushed down from the point; and the outer portion contracting on the inner may compress it so, as to perfectly obstruct the passage of the contents of the bowel.

The inner layer of bowel being strangulated in this way, mortifica-

tion may ensue; and considerable lengths of bowel, thus separated by mortification, have been passed off, and patients have recovered after weeks of suffering; while many have not survived that period.

Such cases are exceedingly difficult to discriminate. Nor is it easy for the best educated touch, and greatest experience, to decide whether indurated fæces or intussusception may constitute the obstruction in the bowel, as the symptoms of both are very similar.

The report of an intelligent patient as to the state of the bowels for some days previous to the attack should assist our diagnosis; but as this disease occurs chiefly in youth and in advanced age, the patients are generally too young; and even those of mature years, when suffering from severe pain, are often so incoherent in their statements, that medical practitioners must generally be guided by their sense of touch and present appearances.

Treatment.—The vomiting having been allayed by twenty grains of bicarbonate of soda or potash for an adult, and half that for a child, an ounce of castor oil, or less according to age, with six drops of laudanum for an adult, should be given as directed for obstruction by indurated masses; and four to six hours after the oil has been taken, large quantities of fluid should be injected into the bowel.

A large enema is equally advantageous in this as in the former case; because by distending the portion of the bowel below the obstruction, it is calculated to unfold the strangulated portion, and thus rescue the sufferer from present pain, and imminent danger. It should therefore be repeated and persevered with, while there is any reasonable hope that the difficulty may be overcome.

Inflating the bowel with air by means of a small bellows acts on the same principle, and has succeeded after other means had failed; but to do this safely and efficiently, requires the aid of a medical practitioner.

Drastic purgatives should not be given in intussusception of the bowel. They increase the suffering and add fuel to the flame. And large quantities of shot and quicksilver, given with the hope of forcing a passage by their weight, are equally objectionable.

Even food, or drink, by adding to the contents of the bowel, increase the evil. Thirst should be appeased by rinsing the mouth frequently with a little cold water, or by a small piece of ice; and the food should be the least bulky, as the yolk of egg, with a little ground rice boiled in milk; or the essence of beef or fowl, boiled in vacuo, and eaten with crumb of stale bread.

Pain should be alleviated by a grain or less, according to age, of extract of opium, given every eight or twelve hours according to circumstances.

Surgical operations by cutting down on the bowel have been so seldom successful, that they can only be advisable as a last resource; and do not come within the limits of household means.

STRANGULATED HERNIA, OR RUPTURE.

This is another frequent cause of obstruction of the bowel, with its usual accompaniments of pain, nausea, and vomiting.

By any strong muscular effort, as in pulling on a very tight boot, or by severe crying in infancy, the bowel may be so pressed against the abdominal walls or external coverings, that a portion of bowel may be forced through the umbilicus or navel; or through the external ring near each groin, or lower down through an aperture in the bony pelvis.

If the aperture through which the bowel passes or escapes, be large enough, the hernia may remain down. and the action of the bowel be continued for years; but generally the aperture is too small to accommodate the action of the bowel, which becomes constricted or strangulated, constituting a very dangerous disease, and formidable obstruction of the bowel.

But although the action of the bowel may go on for a time after the hernia or rupture occurs, still the patient has no safety until it is reduced or returned to its natural position; because strangulation and obstruction may occur at any time.

Any person finding an unusual swelling or tumour near either groin, more frequently the right, slightly painful on pressure, and accompanied, perhaps, with nausea, may calculate that he has got hernia or rupture; which is easily returned to its natural position if it be attended to in proper time.

Treatment.—To replace the bowel, a person who has got rupture should immediately lie down on his back, with the shoulders low, and the buttocks well elevated, and then make gentle pressure over the tumour, which will generally recede to its natural position.

Should the hernia or rupture not be reduced by such effort, then the patient should have a warm plunge bath, at 100° Fahr., for half an hour, after which the former position on the back, with the buttocks raised, must be resumed, and gentle pressure made to return the bowel into the abdomen. If this attempt fail also to reduce the

rupture, medical assistance is absolutely necessary, and a surgeon should see the patient as soon as possible, as the safety of the sufferer depends upon the bowel being relieved before inflammation sets in.

The hernia or rupture being reduced or replaced, the patient should lie in bed until a truss is applied to prevent the rupture returning. By giving the exact circumference, measured over the haunch bones opposite the groins, any apothecary can furnish a truss, which must fit accurately, and not allow the bowel to come down, so as to be pressed upon or injured by the truss.

As much depends on the proper adaptation of the truss, it should be applied in the first instance by an experienced hand ; and by remaining in bed for a week or two, the ruptured part may be so perfectly restored by the pressure of the truss, that this instrument may not require to be worn long ; but after the second week it is only necessary to wear the truss by day.

In every case of constipation of the bowels, accompanied with nausea and vomiting, hernia or rupture may be the cause, and no feeling of delicacy should prevent strict enquiry and examination being made before medicine is given, as its action would increase the evil.

When strangulation takes place in cases of old standing, nothing but a surgical operation can save the patient, because the bowel becomes adherent to the surrounding parts, and cannot be returned to the abdomen without cutting.

My first case is a good example. In 1833 I was called to see a dispensary patient, whom her husband reported to be suffering from vomiting and spasms of the bowels, with which she had been seized during the night.

I found the patient weak and emaciated, the mother of seven children, the youngest just weaned. Her appearance caused me to expect rupture in her case, and on enquiry I learned that during the last five or six years she had a "lump" about the size of a hen's egg, which appeared first in the right groin, and afterwards fell down to the front of the thigh below the groin ; that it did not trouble her, except when washing and stooping, when it would be painful at night, but better next morning ; that on the previous day she had reached to lift down a salt box, hanging against the wall, when she felt something giving way in the lump, which had been very painful ever since.

On examining, the hernia was found to extend much higher than

the position it had occupied for the last five years. The additional portion of bowel lately forced down had caused the tumour to burst through the fascia of the thigh, and turn up, under the skin, to opposite the right groin.

By a little manipulation I pressed the bowel down and reduced the tumour to about the same size it had been for some years past, when she expressed herself much relieved ; but I found its attachments to the surrounding parts rendered it impossible to return the bowel into the abdomen, or to dislodge it from its former seat.

The bowels having acted, however, under such circumstances for some years past, there seemed reason to hope they might continue to do so ; and, as the poor woman seemed exhausted, I gave a small anodyne, directing her husband to report to me how she was next morning.

The vomiting and spasms returned that night, about the same hour as on the previous night, and her husband came next morning, saying that he thought she would be dead before I could see her. His tale was but little exaggerated, for when I arrived she was almost pulseless ; the hernia had increased to the size it was when I saw her first, and it was evident that the operation had been deferred to the utmost limit of recovery.

I told her and her husband that nothing but an operation could prolong her life, and she replied she would "die sooner than be cut." I then assured her I would not operate against her will, but it being my duty to relieve her, I wished she could be persuaded to allow me to do so ; and that I would retire for a little, that she might consult with her husband and children. Their tears and entreaties, beseeching her not to "die and leave them," prevailed, and after some time the husband said that she agreed to submit to be operated on.

Although the adhesions that had formed made the operation more tedious than usual, yet she bore it without a murmur. In two weeks the wound had healed, and I applied a truss, which she did not require to wear long after the operation. In about twelve months afterwards she gave birth to another child, and she enjoyed good health when I left Ireland in 1840.

Instances like this show the necessity for a doctor to treat strangulated hernia, and the folly of patients who will not submit to an operation when it is necessary.

It is true some have outlived a strangulated hernia ; mortification removing the strangulated portion of bowel, and forming a false opening externally, through which the contents of the bowel pass

without control during the remainder of life,—a state of existence which no human being should be exposed to, without being made aware of its reality. But many sink under their sufferings, before mortification can establish a false passage.

DISEASE OF THE CÆCUM.

The Cæcum, or first portion of the large bowel, which is situated in the right iliac region, near the groin, is frequently the seat of accumulations, and consequent inflammation and obstruction of the bowels; and this portion of the bowel is distinguished from every other part, by having an appendage attached to it, which, from its having no aperture leading from it, has been called “blind,” and from its shape is termed vermiform, or worm-like.

Some attribute to this portion of the bowel an important part in the process of digestion; but all that is ascertained respecting its functions, is, that it is at this part of the intestine that its contents first assume the peculiar odour of healthy excrement; while this appendage is often the seat of indurated fæces, and consequent inflammation.

Although physiologists are divided in opinion as to the use of the cæcum, yet every practitioner is aware of the great amount of suffering and frequent loss of life that occur to human beings from the lodgment, in this portion of the intestinal canal, of indurated fæces; almonds not sufficiently masticated; pieces of raw apples not sufficiently digested; the skins or stones of fruit; or perhaps gall-stones. Such accumulations often cause large tumours in the abdomen, simulating disease of kidney or some other organ.

The first symptoms of this disease are a sense of fulness in the bowels, accompanied occasionally by diarrhœa, but more frequently by costiveness, together with pain shooting down towards the thigh or over towards the buttock; and these symptoms are soon followed by loss of appetite, depression of spirits, coated tongue, and feverishness.

With some patients the inflammatory action is very acute, accompanied with severe colicky pains, nausea, and restlessness. Such cases generally terminate in suppuration, the matter either escaping into the bowel, and thus effecting a natural cure, or else bursting into the peritoneum, and generally proving fatal within thirty-six hours.

In other cases, disease of the cæcum assumes a chronic form, the

accumulation setting in gradually, and the bowels acting meanwhile partially, but not satisfactorily; while the patient complains merely of lessened appetite, lassitude, and a distaste for exercise, together with slight sympathetic pain in that locality.

This state of things may continue for some months; but unless the cause is removed, the patient is in imminent danger, for inflammation must ensue, and the issue is too often fatal.

A medical practitioner in Sydney suffered from the latter form of cæcal disease. Having a talent for portrait painting, and being fonder of the easel and brush than of the lancet and scalpel, he had lately become a devoted amateur of this branch of the fine arts; and had he been spared a few years to practise, he would no doubt have been distinguished, for his first sketch of any countenance was always a striking likeness.

This sedentary employment, however, did not suit his constitution, and was probably the cause of disease which, after a lingering course, proved fatal.

His first symptoms were a feeling of lassitude, and a dull pain on the top of the haunch bone, extending from that across to the buttock. Two of his medical friends had told him it was rheumatism; but as stimulating liniments had no good effect, he asked my opinion.

On pressing over the right iliac region, I felt a distinct enlargement of the cæcum, which convinced me that an accumulation there was the cause of his pain, and I advised an active aperient to be repeated each day till the tumour was removed.

After two or three doses the fulness was diminished, but not removed, and he went to the country for a time, and returned very much improved in health and appearance; but he resumed his sedentary occupation, and in a few months afterwards was seized with inflammation of the cæcum, accompanied with excruciating spasmodic pains of the bowels. Still neither he nor his two medical friends could be convinced that it was cæcal disease that caused his sufferings.

One evening, when I called to see him, the tumour in the region of the cæcum had disappeared, and as I learned that the bowels had not acted during the day, and found the abdomen enlarged and tympanitic, it seemed evident that the contents of the tumour had burst into the peritoneum.

He, noticing my change of countenance, asked the reason for my anxiety, and being told, he smiled, and said, if it were so, he must

have felt as if a red-hot iron had penetrated, and that, on the contrary, he had no increased pain.

I told him that, being under the influence of opiates, he had not his natural feeling; and that I dreaded the issue, and would advise him to prepare for the worst.

Next morning, when I entered his room, he smiled, said he had had a tolerably good night, and was still living; but his symptoms were not improved.

He died the following night, and at a *post-mortem* examination it was found that the cæcum and its appendage had suppurated, and the matter had escaped into the peritoneum, which contained a large quantity of pus and fluid.

Another case that occurred to me, in Brisbane, leaves the impression that sedentary habits, in some constitutions, conduce to cæcal disease.

A gentleman of robust constitution, and formerly very active in his habits, accepted a seat in the Legislative Assembly of Queensland, and during the first session was seized with nausea and severe spasms of the bowels.

He had been ill for some days before I saw him, and his medical attendant had treated him very properly for the prominent symptoms, which were colic and constipation; and the bowels had acted, and the spasms had ceased. But on pressing over the right iliac region there was a tumour that had suppurated, and showed a tendency to come to the surface. To encourage it to do so, a blister was applied; but, fortunately, the matter burst into the bowel, and by the aid of iodine, internally and externally, this gentleman's recovery, though tedious, was finally perfect.

Treatment.—The great object in the treatment of disease of the cæcum is to remove lodgments, that have accumulated there, before inflammation sets in. For this purpose aperients are required that act moderately on the lower bowel; two grains of aloes with ten grains of Epsom salts, given in syrup or treacle, night and morning, followed, if necessary, with a large enema of soap and warm water, thrown up into the bowel. But after inflammation commences, aperients by the mouth are of little service; and injections should be used and repeated frequently.

To allay pain, and lessen the inflammation, a dozen leeches should be applied over the region of the cæcum; and three grains of extract of hyosciamus or of conium should be given, in a little syrup, every twelve hours; or, if the skin be dry, ten grains of Dover's powder

may be substituted for the hyosciamus or conium. But the bowels meantime should be acted on by a mild aperient, and the large enema frequently repeated.

If the tumour appears to come to the surface, it should be encouraged to do so by blistering over the part, and then poulticing with bread and water.

The food of such patients should be entirely farinaceous from the commencement of the attack; and after inflammation begins, a milk diet is the best.

To remove the thickening that remains after an attack of this kind, the patient should take two grains of the iodide of potassium, in a wineglassful of water, after breakfast and dinner; and paint the surface over the tumour with the tincture of iodine, night and morning.

During convalescence the food should be very light, alcoholic stimulants should be avoided, and the action of the bowels should be moderated by a mild aperient. To prevent a relapse, such patients require exercise in the open air; but they should refrain from strong muscular efforts.

PERITONITIS.

Inflammation of the membrane that covers the bowels, called the peritoneum, is a severe and frequently fatal disease. It may be caused by exposure to cold and wet; by wounds of the abdomen; by surgical operations on parts covered by this membrane; by ulcers perforating through the stomach or bowels; or by sympathy with an inflamed state of the bowels or other internal organs.

Owing to this sympathy, it often attacks women from the third to the ninth day after their accouchement, when it is called puerperal peritonitis, or child-bed fever; in which form it is known to be lamentably contagious.

Peritonitis is characterised by severe pain and tenderness of the abdomen, accompanied with a small, hard pulse and constipated bowels.

The pain is of a peculiar character, and not readily noticed or detected at first. For if one presses on the abdomen with an open hand, the patient may not complain, and the practitioner may be deceived; but by making pressure with one finger only over different parts of the abdomen, the existence and extent of the inflammation may be discovered by the attendant.

The peritoneum, or membrane known as the caul in the lower animal, is a serous membrane, similar to the pleura that covers the lungs. It is a double membrane, and has been compared to a double nightcap; of which one ply is attached to the walls of the abdomen, and the other ply envelopes the bowels. And as the peculiar office of such membranes is to secrete a little fluid, by this beautiful provision of the Almighty the bowels, although constantly in motion, are protected from injury by friction, owing to the moisture that lubricates the inner surface of their investing membrane.

All such serous membranes are particularly prone to an inflammatory action, and when inflamed, they secrete lymph of an adhesive character, which causes the two plies of the peritoneum to grow together; thus destroying its natural use, and impeding the action of the bowels. And such inflammation is seldom confined to a single point; on the contrary, it spreads so rapidly that it is often exceedingly difficult to arrest its progress, and prevent a fatal issue.

Treatment.—To control this disease, bleeding largely from the arm and full doses of mercury are still recommended by some; but I have seen so much injury done to the constitution by this practice that I cannot recommend it.

The patient when first attacked should have a warm bath at 102° Fahr., for twenty minutes or half an hour, the temperature being kept up during that time, and when well dried, a large mustard poultice should be placed over the bowels for twenty minutes or half an hour, and the poultice should be followed by fomentations with flannels wrung out of hot water; or, if convenient, a decoction of poppyheads.

To alleviate pain, and divert to the surface by perspiration. six grains of Dover's power in a little syrup should be given to a female, and ten grains to a man, every eight or twelve hours. And the bowels should be acted on by an injection of soap and warm water, from two to four pints, thrown up into the bowel morning and evening; as purgatives by the mouth cannot serve until the inflammation is subdued.

If pain continues on pressure over the abdomen after these means have been used for twelve hours, then from half a dozen to a dozen leeches, according to the strength of the patient, should be applied over the points that are painful, and repeated each day while necessary; the Dover's powder, the enema, and fomentations being also continued.

Some patients suffering from peritonitis have great thirst, which, if indulged by large draughts of any fluid, is apt to induce retching that aggravates the pain, and is very distressing to the sufferer.

The drink should, therefore, be limited to a wineglassful of toast- or rice-water, or rennet whey, given every hour if thirst prevails; and this ought to be sufficient food till pain abates and the bowels act. And even then, the food should be very mild, a little ground rice boiled in water and eaten with a little milk; or sago, or arrow-root used similarly for a day or two; when, if the symptoms be favourable, a little chicken broth or beef-tea may be given with the rice; but solid animal food must not be returned to hastily, but be tried gradually with caution.

After such attacks, the action of the bowels requires to be attended to, and if requisite, two grains of aloes with ten grains of Epsom salts to be given at night, in syrup or treacle.

When neglected or badly treated, peritonitis often assumes a chronic character. Numerous adhesions form, which impede the proper action of the bowels, and produce derangement of the whole constitution, accompanied with a tympanitic state of the abdomen and consequent enlargement. Or an increased quantity of fluid may be thrown out by the peritoneum, more than can be absorbed, constituting abdominal dropsy; either of which generally proves very unmanageable, and too frequently incurable.

POLYPUS OF THE FUNDAMENT.

A spongy growth called a polypus, forms occasionally on the mucous membrane of the lower bowel, and being protruded by straining at stool, gives the appearance of a falling down of the bowel. From the latter it is easily distinguished by touch; for on introducing the finger, it is found to be a round tumour attached to one side of the bowel by a small base or neck. Such tumours can be removed with perfect safety by a pair of curved scissors; or by tying the neck of the tumour firmly with a ligature of strong silk or thread, which causes it to drop off in the course of a few days.

PROTRUSION OF THE LOWER BOWEL.

This troublesome affliction, called by nurses a "falling down of the body," is produced by too much straining at stool. It may be caused by the use of drastic purgatives; but we meet with it most

frequently among children that are grossly fed, owing to the constant irritation of the bowels, kept up by the effects of undigested particles of food passing through them.

Treatment.—The protruded portion of the bowel should be sponged with cold water, and pressed up by two fingers, one applied on each side: making gentle but steady compression upwards until the bowel is replaced.

Care should be taken in every instance not to allow the bowel to remain long down; for, if so, it becomes congested and swollen, and if neglected, mortification of the protruded portion might ensue as a consequence.

To prevent a recurrence of this affliction, the child's food must be limited to a moderate portion of ground rice boiled in water, and eaten with a little milk; or sago or arrowroot used similarly, every four hours only, during the day; pieces in the intervals being prohibited, and no feeding at night permitted.

When the protrusion has occurred often, the bowel becomes so much relaxed, that it is necessary to apply an astringent to restore its tone. For this purpose a little burned alum powdered, and sifted through gauze, should be dusted over the protruded portion before it is returned into the bowel. But without proper attention being paid to the child's food, and its hours of eating, little good can be done.

PARASITES IN THE BOWELS.

Worms, as parasites, often injure our health, and rob us of happiness. Many different species infest mankind; but we shall confine our attention to three kinds that are found in the stomach and intestines: the large round worm; the small thread worm; and the tape worm.

The presence of worms in the intestinal canal is generally indicated by a depraved appetite, great thirst, bad breath, itching of the nose, pain of bowels, or convulsions; but as any or all of these symptoms may proceed from other causes, to see portions of worms pass off externally can alone give us reliable evidence that they affect our health.

The large round worm inhabits the upper portion of the bowel or the stomach; and from the latter it frequently passes up through the tube called the œsophagus, and out at the mouth or nose of children while asleep.

The eggs or larvæ of worms are taken into the stomach with water or raw vegetables; and, as salt is pernicious to the young of all vermin and insects, if parents and nurses could be persuaded to season the food of children with salt in preference to sugar, the vendors of worm powders would do little business.

In some localities these round worms are very numerous and prevalent. Dr. Hooper reports a case in which one patient voided two hundred in a week.

Dr. Patterson of Leith observed, that some of his patients, who used water from a well supplied by a pond called Lochend, were very subject to worms, while those in the same district who used other water, were seldom annoyed with these parasites.

In the 9th Volume of Dr. Duncan's Medical Commentaries, we read, that a boy after taking a dose or two of calomel and jalap, emitted very many caterpillars, all alive and full of activity. This lad had been in the habit of eating young cabbage leaves; and as the moth lays its eggs on them, he had swallowed some eggs, which were hatched in his bowels. He suffered severe pain of bowels for some weeks, and had locked jaw; but, after the animals were expelled by the medicine, he recovered perfectly.

It is also related by Dr. Pickells, in the Transactions of the King and Queen's College of Physicians in Ireland, that a patient of melancholic disposition had been in the daily habit of drinking water mixed with clay, taken from the graves of two priests, whose memories were revered, and in the course of three years and a quarter this patient discharged, partly by vomiting, and partly from the bowels, above two thousand beetles. Some of these insects ran off as soon as they were vomited into holes in the floor, and two of them were so large and vigorous as to immediately fly away. These strange births were preceded by a distressing train of symptoms; severe headaches, vomiting of blood, and convulsions; but the patient finally recovered by means of large doses of turpentine. Hence we see the necessity for avoiding bad water, and of care when we eat raw vegetables.

When practising in Sydney, in 1850, a respectable young woman consulted me respecting a tumour in her neck, on the left side, a little above the apple. It had been there for some months; and, at first, caused a sensation of fulness in the throat, and a disposition to swallow something, she said, "that she could never get over;" but this desire to swallow often lessened, however, as the tumour became

more prominent externally. Still she wished the tumour removed, because it was an eyesore.

As liniments and iodine, applied by others she had consulted, made no impression on the tumour, it occurred to me that it might be an aneurism of the carotid artery, it being in close contact with that bloodvessel. Finding, however, no pulsation in the tumour, and being able to insinuate a finger between it and the artery, I was convinced that it was no enlargement of this vessel. I tried then to draw the tumour out, in order to ascertain if it could be safely removed by an operation. In doing so I felt a distinct sensation of motion in the tumour, convincing me that it contained some living animal, which by a little manipulation I succeeded in pressing up to the root of the tongue; when by a strong effort to cough, the patient expelled a round worm six inches long.

This young woman never had the usual symptoms of worms, so that this may have been a solitary one; which being doomed to live as an old bachelor, preferred seclusion, and had adopted this recess as its future domicile.

It seemed difficult to comprehend how this worm became so prominent on the surface; but I saw this explained afterwards, by the history of a case given by Dr. Worthington in the 30th Volume of the Medico-Chirurgical Transactions.

In a patient, who seemed during life to have the power of ruminating, like cows and other animals that have a double stomach, it was discovered after death that there was a rupture in the tube leading to the stomach, the muscular fibres having separated, allowing the mucous membrane to be pressed out in the form of a pouch, into which portions of food entered in the act of swallowing, and were afterwards returned, by a voluntary effort, to the mouth for a second mastication.

Now a similar rupture must have been made in the throat of my patient by the pressure of the worm, which thus formed a prominent tumour in her neck, and caused considerable deformity.

Treatment.—As a remedy against the round worm I have found bitters the most efficient. A cupful of infusion of quassia, or wormwood, half an ounce to the pint of water, taken in the morning before food, and followed in half an hour by twenty grains of ipecacuan, taken in divided portions as an emetic, will generally expel them from the stomach; and the same bitter draught taken in the morning and followed by half an ounce of oil of turpentine, combined with the same quantity of castor oil, a tablespoonful of each,

will expel them also from the bowels. These are sufficient doses for a male adult; half being sufficient for a child of twelve years, and less in proportion to age. But it is frequently necessary to repeat this medicine.

THE SMALL THREAD WORM.

This small round worm inhabits the lower portion of the bowel, and, like other parasites, it is marvellously prolific, multiplying by hundreds. They often creep out upon the bed linen, and are especially annoying, by causing incessant, intolerable itching of the fundament.

Treatment.—Bitters are equally effective as a remedy against the small as against the large round worm. But to dislodge them from their encampment, the medicine must be thrown up into the bowel as an enema, taking care that the bowel be empty; and after the enema the castor oil and turpentine in equal parts, half an ounce of each for an adult, must be taken by the mouth to carry off the dislodged worms.

Bitters taken by the mouth have lost their effect before they reach the habitation of the thread worms, and it is also necessary to recollect that the eggs of these worms imbedded in the mucous membrane cannot be removed immediately, and that the medicine must be repeated once a week, until all are destroyed and banished.

Another species of round worm chooses for its abode the anterior chamber of the human eye. Of this I saw one instance. The worm, when quiet, lay coiled up in the bottom of the eye, immediately behind the pupil. But in a sportive mood it would occasionally twirl about, causing a waving, indistinct vision to the patient, but giving no pain nor uneasiness.

A different species of round worm, still more troublesome to them, lodges in the windpipe of fowls, causing the croup of this animal. It is easily killed by dropping a little turpentine off a feather into the air tube as the bird gapes for breath. This does not hurt the fowl, and should be repeated every morning until it succeeds.

THE TAPE OR FLAT WORM.

This is the most dangerous of all the parasites common to Europeans. It inhabits the upper portion of the bowel, and its presence, at first, causes little uneasiness; but as it increases rapidly

in size, its pressure on surrounding parts produces a train of symptoms, varying very much in different individuals, so that the only positive evidence of the presence of tape-worm is to see some portion of it that has been expelled from the bowels.

Some patients suffering from tapeworm have constant itching of the nose or fundament, some have vertigo or giddiness, some have loss of appetite, while others experience the opposite ; some have frequent colicky pains of the bowels, and some get epileptic fits or convulsions.

The tape worm is an hermaphrodite, having both sexes, male and female, united in the same creature. It is divided into joints or segments, and each of these joints has within itself the sexual organs and power of reproducing its species.

Each worm may measure from 10 to 40 feet, and may contain from 400 to 1000 joints, each joint producing many hundred eggs, so that the fertility of a single worm is incalculable.

When the worm has increased to a certain length, the lowest joints become impregnated, and their eggs being fully formed, these joints are separated and expelled by a natural process, even without medicine.

All joints when expelled from the bowel should be immediately burned, for each joint, as already stated, contains hundreds of eggs, and each egg contains a hydatid, one of the most formidable enemies mankind has to contend with, as regards the safety of either our persons or our domestic animals, or our flocks and herds.

After the joints are expelled decomposition soon sets in, and the eggs, which are like grains of fine sand, being set at liberty, are carried by the next shower to some adjoining pond, to be swallowed by animals in their drink ; or they are blown by the wind upon grass, vegetables, or ground fruits, as strawberries, to be eaten by the lower animals and human beings. And each egg is protected by a calcareous coat or shell, that defends it against all extremes of temperature, drought, or moisture ; so that nothing can impede its dissemination, and the propagation of hydatids.

Treatment.—To remove tapeworm from the bowels, one of three remedies—oil of turpentine, the ethereal tincture of male fern, or kousso—is certain to succeed. The most familiar and applicable as a family medicine is turpentine, which in full dose,—half an ounce to a child of twelve years of age, increasing in proportion to age and strength up to one and a half ounces for a strong man—seldom fails.

A little heated buttermilk is a good vehicle, for the turpentine floats on it and goes over first, while the milk covers the taste.

It should be given in the morning before food, and the patient should remain in bed till it begins to operate, lest the stomach should reject it. It is well to mention also that this large dose may produce giddiness, similar to the effects of alcohol; but that passes off when the medicine acts.

Any portions of tapeworm passed off must be carefully examined, and the head searched for. Until the head of the worm is expelled, little is accomplished; for while it remains the removed joints will soon be replaced by fresh ones. And the head is easily recognised by its round form, and by having black streaks on it.

The hydatid contained in each egg is too small to be distinguished by the naked eye; but, viewed through the microscope, it consists of a head with a small bag of fluid attached to it, into which it can retract its head at pleasure.

The head is furnished with four sharp piercers, two above and one on each side; and with these the creature can penetrate any membrane or bloodvessel of the animal it enters.

Hydatids are, however, found most frequently in the liver, to which they pass from the bowel by the bile duct; but they are found also in every part of the body, and the brain is frequently occupied by them.

Dr. McKenzie, the distinguished Scotch oculist, found them in the human eye; Morgagni, the French physiologist, found one the size of a cherry in the left side of the heart; Dupuytren found one on the right side, as large as the heart itself; and Professor Watson, in his beautiful lectures delivered to students in King's College, London, and published in 1857, gives the case of a patient in Middlesex Hospital, who died from hydatids of the liver, which had increased to such an extent that they filled a washhand-basin.

The hydatid is not a perfect animal, it has not the organs of reproduction, being only the larva or tadpole of the tapeworm. But by a law peculiar to it, the membrane on the inner surface of the bag, which Professor Goodsir calls the germinal membrane, has the power of producing other hydatids; so that one may multiply to such an extent as to fill any cavity in which it may be located.

Tumours of this kind are found of every size, from that of a garden pea to the bulk of a man's head; and against this, one of the most formidable assailants we have got to contend with, we have often no missile, and seldom any efficient remedy.

One of my relatives, in 1860, noticed a tumour forming in his tongue, which at first gave no pain, but, as it increased, the pressure on the surrounding parts became troublesome. An intelligent physician in Sydney applied nitrate of silver (caustic) to it without benefit ; and, as the tumour was increasing, the lad came to Brisbane that I might see it.

I found the tumour, about the size of a walnut, embedded in the tongue, but most prominent on the underside ; and as it was calculated by its growth to destroy life, by pressing on the larynx or wind-pipe, or by impeding deglutition, it caused me considerable anxiety of mind.

A literary gentleman of great experience, who had formerly studied and practised medicine, being in Brisbane at that time, I gladly availed myself of his opinion. Seeing the unfavourable position of the tumour, and the prospect of its soon assuming a malignant character, this gentleman advised that the patient should immediately be sent to London to be operated on, as the tumour had the appearance of incipient cancer of the tongue, which occasionally sets in early in life.

To adopt this advice was not convenient, because his father could not leave his charge to accompany him ; and the lad, then about eighteen, was too young to go alone such a journey, with the impression on his mind that should he survive the voyage half his tongue, at least, must be excised on his arrival in London.

I had never seen a hydatid so near the surface ; but its undulating form, and the feeling of fluid in it when touched, gave me the impression that it was a hydatid. Being thoroughly impressed with this idea, and knowing that the mineral salts destroy all animalcules, I resolved to try their effect in this case ; and, assisted by the Hon. Dr. Hobbs of Brisbane, who joined me in opinion, I pierced the tumour with a trochar. The result convinced us our diagnosis was correct, for on withdrawing the stylet a quantity of the gelatinous limpid fluid of the hydatid escaped.

I then injected the tumour, through the canula retained in it, with a saturated solution of sulphate of copper (bluestone), pressing afterwards on the orifice for a few minutes, to prevent the medicine flowing out by the wound.

This experiment was perfectly successful, very little pain followed ; in two weeks the tumour was greatly diminished, in a month no trace of it remained, nor has it ever returned.

In this instance my relative must have swallowed an egg of some

tapeworm in water, or with some vegetable or ground fruit ; and the hydatid in it had probably been conveyed to the tongue by the vessel that supplies it with blood.

I mention this case because it is the only one, as far as I know, in which the sulphate of copper has been used for the cure of hydatids ; and the subsequent inflammation was so trifling, and it acted so beneficially in some other cases since that, in which I advised it, that it seems greatly preferable to the tincture of iodine, which is the usual remedy for this purpose.

Nor are human beings the only sufferers from hydatids. Pigs, from eating offal, swallow tapeworms and get hydatids, causing the measles in pork. Horses and cows eat the eggs with their grass, and get hydatids, producing the affection of the brain called staggers. And sheep get the eggs in their water or on their pasture, giving rise to sturdy, the result of hydatids on their brain.

It should, therefore, be the object of all rational beings to endeavour to protect themselves and their animals against such dangerous parasites, which can be done only by lessening the frequency and prevalence of tapeworms.

Now no person can get tapeworms, except by eating underdone beef, mutton, veal, pork, bacon, or sausages. Perfect cooking gives protection ; but beef or mutton from which blood streams when it is cut, is not sufficiently cooked ; and underdone pork, bacon, or especially sausages, should be shunned.

Cats and dogs are the great source from which hydatids are derived. Mice and rats get hydatids by eating tapeworms ; cats get tapeworms by eating mice ; and dogs get tapeworms by eating raw meat.

These facts have been fully established by the discoveries and experiments of physiologists.

Dr. Henry Nelson found hydatids in the livers of mice and rats, and Dr. Allen Thompson repeated and confirmed that discovery ; and common observation has often convinced us that cats and dogs frequently pass joints of tapeworms, the eggs of which are scattered abroad for the destruction of man and other animals. Of this the following experiments should be sufficient proof.

Professor Von Siebold gave hydatids to young dogs, and on killing the dogs at the expiration of two months, he found that the tapeworms had grown to the length of ten and twelve inches ; and in other dogs killed after three months the tapeworms were from twenty to thirty inches long. Professor Kuckenmeister, and also

Haubrun, of Dresden, made similar experiments with the same results.

Kuckenmeister also gave to dogs hydatids taken from the brain of a sheep; and having as a consequence obtained tapeworms from the dogs, he gave eggs of these tapeworms to young lambs, and in fifteen days afterwards the symptoms of sturdiness set in. The lambs died of vertiginous disease, hydatids being found in the brain, heart, and other organs.

Professor Leuckart gave the eggs of tapeworm to a calf, and forty days afterwards, on dissecting out a piece of flesh from the neck of the calf, he found it occupied by hydatids, which affords unequivocal evidence that persons may get tapeworms by eating meat that is imperfectly cooked.

Nor has the enthusiasm of physiologists been confined to these experiments on the lower animals. Resolved to remove all doubts on this subject, Professor Humbert, of Geneva, in the presence of two other doctors, swallowed fourteen hydatids on the 11th of December, 1854, and early in March of the following year, about three months afterwards, he felt the symptoms of tapeworms, and on taking medicine, discharged some portions of them.

This was certainly a great sacrifice of one's feelings and comfort for the sake of science. But to experiment for hydatids in one's own person, no man of sound mind would attempt; because a dose of oil of turpentine, ethereal tincture of male fern, or of kousso, could not remove hydatids in the same manner that it expels tapeworm from the bowels.

On the contrary, the eggs when swallowed might be carried to the brain, heart, or other organ, where the hydatids would go on multiplying, cause incessant suffering, and finally destroy life, in despite of any known remedy.

Professor Kuckenmeister succeeded, however, in making this experiment by stratagem. Having obtained permission from the authorities, he concealed the eggs of tapeworms in the food of a criminal under sentence of death, and when the culprit was executed in the course of some days, hydatids were found in different parts of his body.

The experiments and discoveries just enumerated have fully and satisfactorily demonstrated, that hydatids, having performed their first stage of existence as hydatids in one animal, must next become tapeworms in the bowels of cats, dogs, and other animals, from which again eggs are furnished to produce hydatids in sheep, cattle, horses, and human beings.

The tapeworms of a single dog, either native or domestic, might in a short time supply a million of such eggs. It is evident, therefore, that every sheep or other animal affected with sturdy or staggers should be burned, because hydatids seldom affect one part only of any animal.

The manure from the dog-kennel, and the sweepings of the yard, should also be scrupulously burned, lest the eggs of tapeworms be eaten by human beings or other animals. Nor can it be doubted, that in proportion to the number of cats and dogs in any locality, we must multiply the risks of getting the eggs of tapeworms with our water, raw vegetables, or ground fruits, while our flocks and herds are equally endangered.

In Iceland hydatids have become an endemic or local disease, which Professor Leuckart attributes to the circumstance of the inhabitants living chiefly on animal food, and keeping a multitude of dogs. He says that on the average there are, at least, eleven horned cattle for each human being in that country; while every peasant keeps fully half a dozen dogs, which furnish such an abundant supply of tapeworms that any medical practitioner there may often have a hundred patients suffering from hydatids at the same time. And from the number of dogs that one sees in all parts of Australia it would be strange, indeed, if persons living there did not suffer occasionally from these parasites, both in the form of hydatids and tapeworms.

In Germany and in South America also pigs are subject to encysted worms, different from "measles," and still more dangerous. This parasite was first examined by Professor Owen, of London, in 1835, and called *Trichina spiralis*, from its likeness to a twisted hair.

The favourite habitation of this parasite seems to be the flesh or muscles of the human being, of which the voluntary or external are preferred. When the eggs are swallowed in underdone pork or sausages, the creatures pierce their way through the bowels and every other membrane, until they arrive at the external muscles of the body and limbs; and if the number swallowed has been large, the constitutional irritation produced by their march from the interior of the body to the surface causes severe fever, accompanied with great depression, similar to the action of some deadly poison.

Professor Zeuker, of Dresden, in 1860 first directed the attention of medical practitioners to the effects of this parasite, and proved that it is frequently the cause of fatal disease.

In 1862 above five hundred persons suffered from it in the Duchy

of Brunswick ; and one gentleman, who survived a protracted illness, being doubtful about the cause of his disease, requested to have a piece of his flesh cut out, which, when examined by the microscope, contained several *Trichinæ*.

As no cure has yet been discovered for this formidable parasite in the flesh, I cannot recommend this operation. It is much safer and more profitable to take care that our bacon or sausages are thoroughly cooked.

THE LIVER.

THIS organ is situated on the right side, under the false ribs, immediately below the diaphragm or transverse muscle that separates the chest from the abdomen, and opposite the stomach, which we have stated occupies the left side.

The liver is the largest gland in the body, weighing from 1 lb. to 4 lbs., and measuring from 4 to 12 inches in width, by 2 to 6 inches in depth, according to the size of the individual ; and it is divided into two lobes, the right being larger, and the left, or that next the stomach, being the smaller lobe.

The chief function of the liver is to secrete bile, which we have noticed performs an important part in perfecting the process of digestion, and, combined with the pancreatic juice, separates from the chyme coming from the stomach that all-important fluid, the chyle, which replenishes our blood. But this gland, we have reason to be convinced, performs also an important service in the animal economy by eliminating from the system what would be injurious if retained in it.

The bile secreted by the liver is a complex fluid of a dark golden brown colour, and the quantity supposed to be produced daily is estimated about two pounds in an adult ; but it varies very much in different constitutions. This secretion is increased by rich food, spices, and fermented liquors, as ale, porter, and alcohol, unless the persons using them take abundant exercise in the open air.

It is also increased by blue pill, or mercury in any form, by hot climates, and, as some imagine, by podophylline, which, in my opinion, merely empties the bile duct and unloads the gall-bladder.

It is diminished by active exercise in the open air, by a temperate climate, by the disuse of stimulants, and by the iodide of potassium.

When bile is secreted it is stored in the gall bladder, its common reservoir, until it is required by the presence of chyme in the first

portion of the bowel, to which it is then conveyed by its own duct to mingle with the chyme and pancreatic juice.

The bile in certain states of the constitution contains too much inorganic matter, which forms concretions, commonly called gallstones. The size of these varies from that of a small pea to a walnut or hen's egg ; and the passage of these through the bile duct, which is about the width of a goosequill, always causes severe spasms, the delay and suffering being in proportion to the size of the obstruction. With some the spasms are transient, passing off in a few minutes ; with others they may continue for days or weeks, while the intense pain is accompanied with nausea, vomiting, jaundice, constipation of the bowels, and considerable fever.

Females are more subject to these attacks than men, owing to their sedentary habits and want of exercise.

Treatment.—The pain being of the spasmodic character, everything calculated to relax muscular fibre has an influence in relieving it, and is beneficial. A warm bath at 100° Fahr. for twenty minutes or half an hour is always serviceable, and flannels well wrung out of hot water and often replaced act on the same principle, and in such cases cannot be dispensed with.

To alleviate pain and reconcile sleep, it is generally necessary to give an anodyne at night, and ten grains of Dover's powder for a male adult does a double service by disposing to the surface and relaxing the skin. But as the duct is small, and must be dilated by the pressure of the gallstone, our remedies can only alleviate, they cannot terminate the sufferings until the obstruction passes off.

An emetic of ipecacuan, twenty grains in a teacupful of tepid water, often has a happy effect in hastening the expulsion of the gallstone ; and the dejections from the bowels should be searched to ascertain if the enemy has been expelled. The cessation of pain does not give perfect assurance of that ; for the stone, which has been impacted for a time in the duct, may pass back again into the gall-bladder, in place of being ejected into the bowel.

Constipation of the bowels is a troublesome accompaniment of such attacks ; and to relieve this, two grains of aloes with ten grains of Epsom salts, given at night in syrup or treacle, are sufficient. Drastic purgatives are not serviceable, and their use should be superseded by an enema of soap and warm water thrown up into the bowel every morning if it is required.

The food should be farinaceous, arrowroot or ground rice boiled in water and eaten with milk.

JAUNDICE.

This affection is a common consequence of obstruction to the flow of bile, which when retained in the gall-bladder is absorbed into the blood, and causes the yellow tinge of the eye and skin, as also the brownish-yellow colour of the urine characteristic of this disease, and affording a familiar test to nurses, who are right in saying that patients are jaundiced when their urine turns linen yellow.

Gallstones are not the only means by which the flow of bile from the gall-bladder may be obstructed ; for the bile may become inspissated, so that it cannot pass through the duct ; or the duct may be temporarily contracted by spasm, impeding the passage of bile. And to the latter cause we must ascribe jaundice, occurring after a fit of passion, or from distaste to some particular kind of food.

A lady patient of mine, distinguished for good sense and free from caprice, could never eat pig's flesh in any form without suffering from an attack of jaundice afterwards ; nor could she sit at table where it was eaten without being similarly affected.

Jaundice may also be caused by the liver failing to remove the constituents of bile from the blood, as when this organ ceases to secrete bile, when it is inflamed and otherwise diseased.

Treatment.—Our remedies for jaundice, to be efficient, must be calculated to remove the cause. If this be an impacted gallstone, the means mentioned above must be persevered in until the obstruction is ejected.

If inspissated bile be the cause, half a grain of podophylline, given with ten grains of Epsom salts, in a little syrup, every night, will soon succeed ; and is greatly preferable to blue pill or calomel, too often given for this purpose.

If spasm of the bile duct, from anger, or fear, or aversion to some particular kind of food, be the cause of jaundice, twenty grains of ipecacuan, given as an emetic in a cup of tepid water, to relax the spasm, and followed by two grains of aloes and ten grains of Epsom salts, at night, will generally be sufficient ; but if not, it should be repeated daily until the jaundice declines.

If disease of liver is present the cure of jaundice is very difficult, and the recovery uncertain ; because the diseases of this organ generally arise from habits we cannot sufficiently control, and from causes so deep-rooted that they cannot be eradicated.

For such chronic cases the medicine I place most confidence in is

two grains of the iodide of potassium, taken in a wineglassful of water after breakfast and dinner, together with ten grains of the extract of taraxacum (dandelion) and two grains of powdered aloes, taken in syrup every night. This medicine must be continued, and alcoholic drinks, especially ale and porter, must be abstained from, until the state of the liver is improved.

The food should be farinaceous, and moderate exercise in the open air should be taken daily, if the weather be suitable; but the body must be protected from chills, and warm clothing is necessary to secure proper action of the skin.

It is unnecessary to say that the popular idea that jaundice can be cured by charm is equally absurd as it is fallacious.

CONGESTION OF THE LIVER.

This disease is indicated by a sensation of weight on the right side in the region of the liver, accompanied with loss of appetite and slow bowels. It may be caused by taking exercise too soon after meal; by too much study; by sedentary habits; and by food difficult to digest.

Treatment.—Two grains of the iodide of potassium should be taken in a wineglassful of water after breakfast and dinner, together with half a grain of podophylline and ten grains of extract of taraxacum each night, to stimulate the flow of bile and regulate the bowels.

The diet should be chiefly farinaceous, avoiding butter, made dishes, and oily food; and all alcoholic stimulants should be abstained from. To these means should be added as much exercise on horseback as can be taken without fatigue or causing pain of side; and change of occupation is also advisable.

INFLAMMATION OF THE LIVER.

This affliction often follows congestion, when this has been neglected or badly treated; and in addition to the causes which induce congestion, extreme heat predisposes to this disease, as it prevails chiefly in hot climates, owing to persons, when overheated, getting chilled suddenly, or taking cold drinks.

The symptoms of inflammation of the liver are pain, more or less severe, in the right side, extending to that shoulder, when the right lobe of the liver is inflamed, and to the left shoulder when the left lobe is affected; also difficulty in lying on the left side, difficulty of

breathing, a dry cough, want of appetite, jaundice occasionally but not always, and tenderness on pressure over the pit of the stomach and false ribs, or rather below the ribs.

An attack of this kind, if severe, may terminate in abscess of the liver, that often proves fatal, and is always the cause of much suffering; or if moderate, it may become chronic, causing depression of spirits, frequent headaches, and bad health.

Treatment.—Mercury in large doses was formerly prescribed for this and all affections of the liver; but my experience in Australia has convinced me that mercury for the treatment of this disease is not necessary, and is better omitted than applied.

A dozen leeches over the lobe of the liver that is painful, followed by a succession of blisters, are much more serviceable in checking the inflammation. These should be aided by half a grain of podophylline and ten grains of salts, each night, followed by half an ounce of Epsom salts next morning, until pain is subdued.

The drink should be toast-, barley-, or rice-water, with twenty grains of nitre in this drink, every three hours each day, to stimulate the kidneys.

The food should be entirely farinaceous, a little gruel, well boiled and eaten with milk, or stale bread and milk, for breakfast; ground rice boiled in water and eaten with milk for dinner; and arrowroot with a little milk in the evening. Tea does not suit, and coffee is not admissible. If milk does not agree, cocoa can be tried. Alcoholic stimulants of every kind are pernicious.

When the inflammation has been subdued, which is known by the absence of pain, improved breathing, clean tongue, and returning appetite, then the nitre should be discontinued, and the patient should take two grains of the iodide of potassium in a wineglassful of water after breakfast and dinner. The same vegetable diet should still be continued for a week or two, and very little animal food should be eaten for some months.

If any feeling of weight or uneasiness remains in the right side, the surface over the liver, from the pit of the stomach round to the spine, should be painted every night with tincture of iodine; while the iodide of potassium is also taken internally.

The action of the bowels in such cases requires to be attended to, and half a grain of podophylline, with ten grains of Epsom salts, should be taken in syrup at night, when required.

Moderate exercise, especially on horseback, is conducive to perfect recovery.

ENLARGEMENT OF THE LIVER.

This malady is also a frequent consequence of previous congestion of this organ. The liver, in a healthy state, does not extend below the ribs; but when enlarged, it may descend to the groin. The right lobe frequently extends down on a line with the navel; and the left lobe often occupies the space at the pit of the stomach, and presses so much on the latter as to keep up constant nausea and vomiting.

All the patients in my practice who suffered from enlargement of liver had been fond of stimulants, rich food, and indolence. They had indulged in the use of ale, porter, brandy, or rum, which had, no doubt, caused the enlargement of liver, and the dropsy from which they suffered. But we are aware that the same causes which produce enlargement of liver in one constitution, may, in another, cause a shrinking and wasting of this gland; just as we see some persons fattening by the use of stimulants, while others become thin and emaciated. Now, this reduced and indurated state of liver may also be the cause of dropsy.

Treatment.—If the liver be painful when pressed on, indicating an active action, a dozen leeches should be applied every day until this pain is reduced; and five grains of the iodide of potassium should be given in a wineglassful of water after breakfast and dinner. And as an external application, iodide of lead salve, made with two drachms of the iodide to the ounce of rendered suet, spread on soft leather, should be applied and worn constantly over the enlarged liver until it is reduced in size.

The bowels should be acted on by half a grain of podophylline, with ten grains of Epsom salts, given in a little syrup, each night, and followed by half an ounce of Epsom salts the next morning. The food must be farinaceous. Ale, porter, wine, and other alcoholic stimulants must be prohibited, while exercise by carriage or on the saddle should be taken daily.

A speedy recovery in such cases need not be calculated on, for, as diseases of this kind are of chronic growth, they can be removed only at a slow pace, and by steady perseverance.

THE SPLEEN, CALLED IN CATTLE THE MELT.

THIS organ is situated on the left side, behind the stomach. It is about six inches long, by three broad. Its use in the animal economy

is still subject of conjecture; but the general impression is that it serves as a reservoir to receive blood when the stomach is empty, and to hold it in reserve for the liver, when it is required to furnish bile for the perfect digestion and preparation of chyle.

The spleen, like other organs, is subject to disease, and it is often enlarged. Although its natural weight would be about half a pound, yet it has been found to weigh ten or eleven pounds, and filling half the abdomen. This enlargement generally results from repeated attacks of ague, and has been called the "ague cake."

Treatment.—Quinine in one or two-grain doses after breakfast and dinner is found to be the best medicine for reducing enlargement of the spleen, together with abstinence from all alcoholic drinks. The food should be farinaceous only, and the bowels should be acted on by two grains of aloes and ten grains of Epsom salts taken every night, while exercise by carriage or on horseback is also favourable.

THE KIDNEYS.

THESE glands are double, the right being situated below the liver, and the left below the spleen, on each side of the spine.

The office of the kidneys is to secrete the urine, which when collected in the kidneys, is carried thence by two ducts, called the ureters, to the bladder. These glands are also subject to disease, especially inflammation, either active or chronic, and also to fatty degeneration, known as Bright's disease of the kidneys.

INFLAMMATION OF THE KIDNEYS.

This affliction may be caused by exposure to cold or wet, by calculous matter forming in the kidney, by external injury, or by the abuse of alcoholic drinks.

It is indicated by pains in the loins, extending along the course of the ureter to the bladder, and frequently to the thigh; while in men we notice a diminution or retraction of the testicle on the same side as that on which the kidney is affected.

If both kidneys are inflamed, which rarely happens, there may be perfect suppression of urine; but in any case, even when one only is affected, the urine is scanty and high-coloured, while the patient is feverish and restless.

If suppression of urine supervene, the urea retained in the blood

acts as a poison to the nervous system, causing stupor, or perhaps epileptic fits, and, finally, death.

In milder cases, one only being affected, the kidney may suppurate, and the matter pass off by the bladder, without much apparent injury to the constitution.

Treatment.—When attacked with inflammation of the kidney, the patient should have a warm bath at 102° Fahr. for half an hour. Being then well dried, he should be put into bed between blankets, and get ten grains of Dover's powder, in a little syrup. No drink should be taken immediately after the powder, lest the stomach should reject the medicine; but two hours afterwards perspiration should be encouraged by drinking warm toast-, barley-, or rice-water. After giving the powder, a large mustard plaster should be applied over the loin on the affected side, and retained there until the skin is perfectly red.

Next morning the damp blankets should be removed and replaced by well-aired sheets; and if pain continues on pressure over the kidney, half a dozen leeches should be applied, care being taken to wash the mustard well off, and to smear the surface with fresh cream to make the leeches take; and the leeches should be repeated every day till pain abates, nor should the patient leave his bed until all appearance of the disease has gone off.

The bowels should be acted on every day by a dose of Epsom salts (about half an ounce), and the action of the skin must be kept up by sufficient covering, and by drinking warm toast- or rice-water. Sweet spirits of nitre, gin, and all other stimulants, are highly injurious.

The food should be farinaceous only, such as directed for inflammation of the liver, and equal caution is necessary in returning to animal food of any kind.

BRIGHT'S DISEASE OF THE KIDNEYS.

Fatty degeneration of the kidneys, known as Bright's disease, is characterised by the urine becoming albuminous, and coagulating on the application of heat, and the addition of a little nitric acid to the urine. To test the urine properly requires the experience of a medical practitioner; but tolerably accurate information may be obtained by holding a little urine in an iron spoon, over the flame of a candle until it boils, when it will appear cloudy and flaky if it be albuminous.

Treatment.—As this is a chronic disease, induced by a deranged state of the entire constitution, our means of cure must not be local, but such as are calculated to benefit the constitution generally. Rich food, made and seasoned dishes, must be avoided, and nothing eaten but what is light and easily digested. Alcoholic beverages and all stimulating drinks must be avoided, and the action of the skin kept up by frequent tepid baths, and warm clothing.

As medicine, I place most confidence in the iodide of potassium, taken in two-grain doses, in a wineglassful of water, after breakfast and dinner, together with two grains of aloes and ten grains of Epsom salts in a little syrup, taken at night, when the bowels fail to act.

BRONZED SKIN, OR DISEASE OF THE RENAL CAPSULES.

The renal capsules are two small glands seated over the kidneys, and a peculiar discoloration of the skin has been found by Dr. Addison to be associated with a diseased state of these capsules.

Persons suffering from this disease have generally extreme weakness; a feeble pulse; faintness upon the least exertion; pain at the pit of the stomach, shooting through between the shoulders; a pearly appearance of the white of the eyes; loss of appetite and nausea, together with a bronzed appearance of the entire skin, but most marked on the face and hands.

Similar discoloration of the skin has, however, been found by others without the presence of any disease of the renal capsules.

Professor Blumenbach quotes from Bomare the case of a French peasant, whose abdomen became entirely black during each pregnancy. And Dr. Camper gives the case of a lady who began to get brown immediately after she became pregnant, and before the approach of her accouchement would be as black as a negress; but on being delivered the blackness gradually disappeared, and the natural complexion returned.

All the cases given by Dr. Addison proved fatal, so that it is impossible to determine whether the diseased state of the renal capsules was the cause of death, or whether these glands suffered only in common with the diseased state of the constitution.

Treatment.—In the present state of our knowledge of this disease, all that can be done is to support the constitution by tonics and light nourishing food. One grain of quinine given after breakfast, and ten drops of the solution of the perchloride of iron, in a wineglassful of water after dinner, are the most likely to serve. If

quinine causes headache, a wineglassful of infusion of camomile of quassia should be substituted for it ; and the bowels should be regulated by two grains of aloes and ten grains of Epsom salts taken in syrup, at night, when required. Frequent baths, tepid in winter and cold in summer, with plenty of friction, would improve the action of the skin.

THE BLADDER.

THIS is a muscular bag, formed to receive the urine secreted by the kidneys, and to retain it in this reservoir, by the action of the sphincter muscle placed around the neck of the bladder, until a convenient opportunity for expelling it from the system. Like the stomach and bowels it is also lined with a mucous membrane, which may be attacked with inflammation ; while, like other muscles, it is likewise subject to paralysis.

INFLAMMATION OF THE BLADDER.

This may be caused by exposure to wet or cold, by a blow, or pressure on the bladder when distended with urine, or by the irritation caused by gravel or a stone forming in it. The symptoms are severe pain felt on pressure below the bowels, and a desire to micturate often.

Treatment.—This should be similar to what has been recommended for inflammation of the kidneys, to which we beg to refer the reader.

SPASMS, OR CRAMPS OF THE BLADDER.

These are indicated by an irresistible desire to micturate or pass water very often, while the urine is scanty and high-coloured. And they may be caused by too much acidity in the urine, or by the presence of stone in the bladder.

The urine being composed of effete particles of matter thrown off by the constitution, contains earthy or solid particles held in solution by fluid ; and when the solids are in excess they often form a deposit in the bladder, such as is seen occasionally in the bottom of the chamber-pot. This deposit, or sediment, may come away in gritty particles, called gravel ; or it may be retained and accumulate, until, by the contractions of the bladder, it is formed into a calculus or stone.

Persons who use hard spring or mineral water are subject to gravel, or who indulge in fermented liquors, or indigestible food, causing acidity of the blood.

Treatment.—This acidity of the urine is best neutralized by taking twenty grains of the bicarbonate of potash in half a tumblerful of water three hours after food, thrice a day, till the irritability abates, and then once a day until it is removed. All alcoholic drinks, especially ale and porter, should, meanwhile, be avoided, as also rich indigestible food ; and the bowels should be regulated by two grains of aloes and ten of Epsom salts, or, if preferred, thirty grains of Gregory's powder, taken when required.

PARALYSIS OF THE BLADDER.

This affliction, causing retention, or inability to pass the urine, is generally a disease of old age. Weakness of the muscles of the eye, causing distant vision, requiring glasses, and weakness of the muscles of the bladder, and consequent difficulty in expelling the urine, are about the first hints we get that the prime of life is past, and that our day is on the wane.

But paralysis of the bladder may also occur at any age or period of life, by the muscles being relaxed or weakened, from the urine being too long retained and distending the bladder too much, so that it loses the power of contracting to expel the urine. This supervenes occasionally to persons travelling by railway, or otherwise prevented from emptying the bladder in due time ; to women in childbirth, when the labour is protracted ; and to persons in fever, who are not reminded of their wants. Persons advanced in life are, however, especially subject to this affliction when they neglect to micturate at proper intervals, particularly when they drink gin, ale, or spirits, and are exposed to cold afterwards.

When paralysis of the bowel occurs in fever the opposite difficulty is the result, and the contents of the bowel cannot be retained. This is owing to the different formation of the sphincter of the bowel, being entirely muscular ; while the sphincter of the bladder is both muscular and elastic, the latter power (or its elasticity) remaining, although the muscle is paralysed.

Treatment.—Paralysis of the bladder has been mistaken for stricture of the urethra or water passage, and, influenced by this error, gin and sweet spirits of nitre, with other popular remedies, have been given to increase the flow of urine ; but any one of these does

positive injury in such cases. On the contrary, a person suffering from a distended bladder should abstain from such stimulants. He should have a warm bath at 102° Fahr. for forty or sixty minutes; and when well dried should stand with bare feet on a cold flag, or in a flat vessel with a little cold water in it, for a few minutes.

If these means fail to enable him to pass water, it should be taken off by introducing a catheter into the bladder; and until a surgeon can be got to do this the patient should be kept warm in bed, and get six grains of Dover's powder every eight hours to excite perspiration, and make the skin relieve the bladder of any increase of urine.

When the bladder is distended to its greatest limit the sphincter muscle at its neck is obliged to yield, and thus to allow any increase of urine to pass off by drops. This is very deceptive, and has led even medical practitioners to imagine the case to be one of incontinence of urine, from weakness of the sphincter muscle at the neck of the bladder.

When called to see some reported cases of incorrigible incontinence of urine, I have found the bladder distended so as to fill the lower part of the abdomen up to the umbilicus or navel, and on introducing a catheter, have removed two or three quarts of urine from the patient.

Neglect causing retention of this kind is always very dangerous, because the bladder might burst and destroy life, or the urea might be absorbed into the blood and poison the nervous system; or in aged persons the bladder having been too long distended, might never recover its tone or power of contracting, and thus cause the sufferer to be dependent during the remainder of his life on the aid of the catheter.

To prevent either catastrophe, the application of the catheter should not be too long deferred, nor should any feeling of modesty on the part of either patient or attendant be allowed to prevent the necessary examination of any patient. False delicacy should never be permitted to imperil the safety of a human being.

Nor are we to expect that relieving the bladder once will be sufficient. The operation must be repeated every eight, or at least every twelve hours, until the contractility of the muscles of the bladder is restored, which generally takes two or three days. Some patients learn to introduce the catheter, and assist themselves, but this is attended with considerable risk, which should not be incurred if a doctor can be got to attend.

After childbirth, and during fever, it is an important part of the medical attendant's duty to ascertain the state of the bowels and urinary organs of every patient, as nurses are too apt to be forgetful when entrusted with this charge.

When retention of urine, and consequent paralysis of bladder, occur after an accouchement or during fever, a warm bath, as directed above, is not suitable, but a mustard cataplasm applied over the region of the bladder at the lower part of the bowels is often serviceable, and has enabled me to dispense with the aid of the catheter. The use of this instrument in proper hands is, however, always safe, and should not be objected to when it is required.

If the catheter be allowed to remain in the bladder for some time, say one hour after each operation, the recovery will be hastened, and any nurse can attend to it, and remove it with safety.

INCONTINENCE OF URINE.

This, as we have already noticed, is a frequent result of paralysis of the bladder, the sphincter muscle yielding to the continued pressure of the accumulated fluid, and requiring the aid of the catheter. But it may also be created by irritability of the bladder, arising from acidity of the urine, or the presence of gravel or stone in the bladder, obliging the person to micturate very often.

Treatment.—When incontinence of urine arises from either of the latter causes—acidity or the presence of stone—it is always improved by twenty grains of the bicarbonate of potash in half a tumblerful of water, taken about three hours after food, twice a day, till the irritability diminishes, and then once a day till it is removed. This is the dose for an adult, and can be reduced according to age.

Incontinence of urine in childhood is always the result of bad nursing. Children put to bed and allowed to remain for six or eight hours, without being roused to attend to the calls of nature, will soon acquire filthy habits, which, if neglected in proper time, may become permanent for life, especially as regards incontinence of urine. But the sphincter muscle of the bladder is always capable of being educated and brought under proper control, and, under the management of a careful nurse, children soon learn to attend to their own wants.

In some obstinate cases of an acquired bad habit of wetting the bed, I have succeeded by abrading slightly the mucous membrane at the orifice of the urethra, by caustic, or blistering fluid, as the pain

in passing water awoke the patient, and caused attention to the act.

STRICTURE OF THE URETHRA, OR WATER PASSAGE.

Stricture, or a narrowing of any natural passage, may be the result of inflammatory action, or it may be spasmodic, as we noticed when treating of croup.

THE URETHRA,

or canal which conducts the urine from the bladder, being lined internally with mucous membrane, is subject to inflammation, and consequent ulceration; and any such ulcer, when healing, must cause an eschar or cicatrix, which will contract or narrow the passage in this part of its length.

Such inflammation might be caused by contusion, or external injury to the part, or by the irritation of a small calculus or gravel passing from the bladder, and lodging in the urethra; but the common cause of stricture is a purulent discharge of an inflammatory character, vulgarly called "the clap"—gonorrhœa, contracted by whoredom with an unclean woman. And such stricture may occur at the orifice, or in any part of the canal, but it is found most frequently about the centre, or nearer the bladder.

So inflammatory is this gonorrhœal discharge, that if any portion of it comes into contact with the human eye, it produces virulent ophthalmia, which seldom fails to destroy vision.

The contraction of the urethra is not felt immediately, but it is a growing evil, and years after the occurrence of the gonorrhœa, it may render the unfortunate sufferer miserable from a stricture, which can be cured only by the hand of the surgeon and the use of instruments.

As diseases of this kind should not be family afflictions, it is not our intention to notice them, further than to mention that this is the mildest form in which they affect, and that diseased, unclean women often communicate to the constitution a poison which remains in the blood we cannot tell how long, and the effects of which are frequently seen on a man's offspring.

Sufferers from such a malady are often deceived and robbed by quacks and impostors, who advertise their ability to cure all secret diseases, of either male or female, in a short time, while they are generally as ignorant of the proper treatment of such cases as are

the unfortunate dupes whom they ensnare, and from whom they extort money without conscience.

Such pests of society should be eschewed. For the treatment of such cases, patients should select gentlemen of standing in the profession, in whom they can confide, and these being sufficiently known by their education and character, do not require to advertise their abilities.

SPASMODIC STRICTURE OF THE URETHRA.

This form of stricture, causing inability to pass urine, results from a deranged state of the nervous system, and is generally associated with dyspepsia, and occasionally with enlargement of the prostate gland, seated at the neck of the bladder in the male subject.

This affection differs materially from the preceding one. For in spasmodic stricture there is no organic obstruction in the passage; there is merely a contraction, the result of nervous irritation, and this may occur when there is very little urine in the bladder; although the desire to micturate may be as great as if the bladder was fully distended. In many instances, indeed, the anxiety to pass urine decreases as the fulness of the bladder increases.

The means of cure or relief are also different; for organic stricture must be removed by instruments to dilate the passage; while spasmodic stricture, if seen early, is best treated without this aid.

Treatment.—With some patients spasmodic stricture assumes an intermittent form, recurring regularly at a particular hour of the day or night; and such cases can always be cured by quinine, given in large dose, five or ten grains in a little syrup, shortly before the anticipated attack, and repeated at the same hour daily, till the habit is overcome.

Such patients, being dyspeptics, must abstain from articles of food that are difficult to digest, or that are known to disagree with them; they must shun tobacco and alcoholic drinks of every kind; they should exercise freely in the open air, and pay attention to the state of the bowels, taking, when necessary, two grains of aloes and ten of Epsom salts, in a little treacle, or thirty grains of Gregory's mixture, if preferred.

When spasmodic stricture is irregular in its attacks, and does not assume the intermittent form, the solution of the perchloride of iron, ten drops every two hours, till the spasm abates, is the best remedy; the regimen being attended to as above.

In all cases of spasmodic stricture in my practice, requiring the

introduction of a catheter to take off the urine, the stricture was found to be deep-seated, evidently at the neck of the bladder, and seemed to be caused, in part at least, by an enlarged state of the prostate gland, situated in that locality.

When required to introduce a catheter in such cases, I always experienced great benefit from a hot bath at 102° Fahr., together with forty drops of laudanum, given about half an hour before the operation; and I invariably adopted a full-sized catheter, being convinced by experience that it is safe, and less liable to form a false passage than small instruments are.

By the aid of a hot bath, together with a full opiate, I have often been enabled to dispense with the catheter; the patient passing water when he stood on a cold flag, or in a vessel with a little cold water in it, after leaving the hot bath.

In a few cases in which the quinine required to be given in very large dose—twenty grains—to prevent the attack in the intermittent form of this disease, its action was increased by a hot bath; which had also a marked effect in hastening the removal of the spasm, by the solution of iron.

Patients subject to spasmodic stricture should avoid acids, and everything that causes to them acidity of stomach; and when they feel a desire to micturate too frequently, they should take twenty grains of the bicarbonate of potash in half a tumblerful of water, three hours after food, twice a day until the frequency abates, and then once a day till it ceases.

They should dress warmly and avoid chills.

CONTRACTION OF THE PREPUCE, OR FORESKIN.

THE skin which covers the male penis, or private, is sometimes unusually long, and in childhood so contracted at the point, that it prevents the flow of urine from the bladder. And children, by handling the penis, occasionally press back the foreskin behind the head or top of the penis, so that the part becomes so constricted and swollen, that the passage of urine is obstructed.

Treatment.—When the foreskin is elongated and contracted at the point, so as to impede the passage of the urine, the contracted portion at the point should be caught with the finger and thumb of the left hand, drawn well forward, and then excised or cut off by a pair of sharp scissors. This operation is perfectly safe, and requires no anatomical

knowledge on the part of the performer. It is somewhat similar to the Jewish ceremony of circumcision ; and the only care necessary is to have the skin sufficiently pulled forward to prevent the top of the penis being injured by the scissors. Too much of the prepuce or skin cannot be removed, because to have it short is conducive to cleanliness, by preventing the accumulation of the sebaceous matter secreted by the glands under the foreskin, and the unpleasant effluvium from this when allowed to collect or remain.

The quantity of blood lost by removing the foreskin can never be injurious ; and when the wound ceases to bleed, the top of the penis should be covered with a piece of soft calico, spread with equal parts of lard and suet rendered together ; this dressing being repeated daily till the wound heals, and supported by a narrow tape folded gently around the penis, and then tied to a broader tape put around the child's waist. Care must be taken to have this dressing removed as often as the child has a desire to pass urine, and then replaced as at first.

When the head or top of the penis becomes swollen by constriction or strangulation of the foreskin, pressed back behind it, immediate attention is requisite, because not only may the passage of the urine be obstructed, but mortification may set in, and the constricted portion be consequently destroyed.

Any attempt to press the foreskin forward under such circumstances is of no service, but is rather injurious. The first thing to be done is to cover the swollen part with a piece of folded calico, dipped into cold water, and then to compress the swollen part under the damp rag with the points of two fingers and the thumb of the right hand, until the blood is pressed out of it, and the swelling so reduced, that the foreskin can easily be brought forward. But two small pieces of ice, if convenient, are preferable to the damp rag for compressing the swelling with.

If the swelling has been allowed to remain too long, adhesions may have formed, which prevent the foreskin from being replaced, even when the swelling is perfectly removed. Such a difficulty requires the aid of the scalpel, and a surgeon should see the patient as soon as possible.

Adults who have got disease by immoral conduct are also subject to constriction of the head of the penis, and consequent swelling, by contraction of the foreskin when pressed back, for purposes of cleanliness. Cases of this kind require similar compression, and frequently also the hand of the surgeon.

INFLAMMATION OF THE TESTICLES.

THE testicles in the male, like the ovaries in the female, are double. They are distinctive of sex, as their name implies; their office is to secrete seed; and they are occasionally attacked with inflammation.

This may be caused by immoral conduct, such as we have alluded to above; or by external injury, as a kick with a man's foot, a blow from a cricket ball, or other contusion of these glands.

One or both testicles may become enlarged, and painful to the touch, accompanied with heat and a throbbing sensation in the part; and if these symptoms of inflammation be neglected, suppuration may ensue, and destroy the gland.

Treatment.—The first thing to be done for this affliction is to support the testicle by a suspensory bandage, which can be had from any apothecary, or is easily made by a piece of square calico, with tapes at each corner, placed under the testicle and tied to a bandage around the waist. This is absolutely necessary, to take the weight off the nerve that forms a part of the cord that is inserted into the testicle.

This being attended to, the patient should get five grains of tartar emetic, dissolved in a breakfastcupful of water, and given in tablespoonful doses every ten minutes till vomiting is produced.

After the emetic ceases to act, the patient should have a warm bath at 102° Fahr. for half an hour; and when well dried he should lie between blankets, and take ten grains of Dover's powder to excite perspiration, which should be encouraged by drinking warm toast- or rice-water two hours after the powder, but not sooner, lest the stomach should reject the medicine.

Next morning the blankets should be replaced with well-aired sheets, and one ounce of salts should be given in a tumblerful of ginger tea to act on the bowels. And if pain continues after the action of the salts, the emetic of tartar emetic, five grains, in divided doses as before, should be repeated in the evening.

If pain continues after the second emetic, then half a dozen leeches should be applied to the seat of pain, and the bleeding encouraged by fomenting with warm water; the Dover's powder being repeated at night, and the salts next morning.

After a second emetic, which has a peculiar influence on inflamma-

tion of the testicle, leeches are not often required ; but if pain continues, the leeches should be applied, and repeated if necessary.

In some instances leech-bites continue to bleed too long. They are easily stopped by cutting a bit of pasteboard or visiting card round, about the size of a pea, and pressing this firmly with the point of a finger on each bite, till the paper adheres by the coagulated blood around it. Cobweb is also serviceable for this purpose.

The horizontal position in bed or on a sofa is absolutely necessary until the recovery is perfected. The diet should be entirely farinaceous, and the drink toast- or rice-water or rennet whey, stimulants of every kind being injurious.

After pain and inflammation subside, considerable enlargement often remains, and if neglected may become permanent. To remove this the best application is the iodide of lead salve, two drachms of the iodide to an ounce of rendered suet, spread on soft leather or thick calico, and kept constantly applied, the testicle being always supported by the suspensory bandage, and rest observed, lest the inflammation recur.

NEURALGIA OF THE TESTICLE.

This is a severe species of deranged nervous action, quite equal to the pain inflicted by *tic-douloureux* of the face.

The attack commences with pain shooting from the groin down along the cord, and centering in the testicle on one or both sides. It is evidently of the spasmodic character, and hence the testicle is retracted or drawn up, while the unfortunate sufferer screams and writhes with pain.

It generally attacks young men of careless habits, and is always associated with a deranged state of the digestive organs, the result of dissipation.

Treatment.—With some patients it takes the remittent form, recurring regularly at a particular hour of the day or night, and continuing from three to twelve hours, in proportion to the irritability of the patient and severity of the case. For such quinine is the best medicine, and when given in ten-grain dose, shortly before the hour of attack, it seldom fails to prevent it ; but to interrupt the habit, and improve the state of the nervous system, the quinine should be given at the same time, every day or night, for a week.

The food should be farinaceous, with beef or mutton tea ; but alcoholic stimulants must be forbidden, and the bowels should be

moderated by two grains of aloes and ten of Epsom salts, taken at night, in a little syrup, when required.

In a first attack of neuralgia of the testicle nothing has a more immediate effect than a hot bath at 102° Fahr. for half an hour, the temperature being kept up; this should be followed by ten grains of Dover's powder in a little syrup, and if pain continues, five grains of the Dover's powder should be given every six hours after the first dose, care being taken to keep the bowels acting by the aloes and Epsom salts given both night and morning, if necessary, until the attack is subdued.

Such constitutions are always benefited by iron in some form. The most familiar is the carbonate or rust of iron, of which a quarter of a pound, mixed in a pound of treacle, and taken in teaspoonful doses after breakfast and dinner, has a good effect. But this mixture requires to be well stirred up before use, as the iron always falls to the bottom. The solution of the perchloride of iron, taken through a glass tube, is more palatable; and ten drops in a wineglassful of water, after breakfast and dinner, is the proper dose.

Patients of this class should always be very careful of their food and drink. They should avoid pastry, made dishes, pig's flesh, and all indigestible articles of food, as salted fish, preserved meats, and everything they have formerly found to disagree with them. They should abstain from alcoholic stimulants of every kind, and, in place of these, take a tonic after breakfast and dinner, as a wineglassful of infusion of camomile, chiretta, or quassia.

Tobacco, if used at all, should be limited to the smallest quantity; but it never suits nervous dyspeptics, and is better dispensed with.

Exercise in the open air is a sovereign remedy for all nervous affections, and on horseback is the most favourable kind. The shower bath, tepid in winter and cold in summer, is also salutary; and sea bathing, in the season, is very commendable, on account of its bracing effect on the constitution.

DROPSY OF THE TESTICLE.

Each testicle is enveloped in a serous membrane, similar to that which covers the lungs and the bowels; and this inner covering of the gland has the same natural tendency as the pleura and peritoneum to secrete fluid to lubricate its own surfaces; and when this, its natural function, is increased by any contusion or injury, which excites slight inflammation of this membrane, an increased quantity

of fluid is thrown out, and accumulating between the folds of this membrane, constitutes dropsy of the testicle.

Dropsy may occur in one or both testicles, but in general one only is affected, and that on the right side. It causes little pain, and owing to this or the unwillingness of patients to have it examined, we seldom see it until the accumulation is so great as to become troublesome by its bulkiness, and the deformity it causes.

In this state it simulates enlargement of the testicle itself, the result of inflammation; or hernia, rupture of the bowel, having passed through the external ring into the testicle.

From both of these it is easily distinguished by the history of the case. Inflammation of the testicle is always noticed and recollected by reason of the pain it caused; and in hernia the bowel never gets down into the testicle at once; there is always an accident or event connected with it, and by its antecedents we readily recognize it.

The appearance also of dropsy of the testicle is distinctive. It assumes the form of an inverted cone; and as the fluid is generally transparent, by placing a candle or small lamp behind the testicle, the room being darkened, the transparency of the fluid is usually seen through the coverings of the testicle. By touch also we can discriminate, for when we press on the lower part of the tumour we at once discover the resiliency of the fluid.

Treatment.—To remove the water by a trochar, commonly called “tapping,” is the only effectual remedy; but from this we can expect no more than temporary relief, for the membrane having taken on a diseased action, will soon replace the fluid, even in an increased quantity. The operation is, however, perfectly safe, nor can the testicle be injured unless by using a trochar unusually long, because the membrane is external to the testicle, and the water beneath the gland

To effect a permanent cure we must avail ourselves of the tendency, natural to all serous membranes, when much inflamed, to throw out or secrete coagulable lymph, which causes the surfaces to adhere, and thus to destroy the cavity.

For this purpose we inject through the canula, after the water is removed, a little port wine, or equal parts of tincture of iodine and water, and allow it to remain in for ten or fifteen minutes. This causes sufficient inflammation to require the patient to remain in bed for a few days, and seldom, if ever, fails to prevent a return of the dropsy; but should it not succeed, a stronger injection can be used after the next tapping.

The admission of the external air into the cavity through the canula has in some cases excited inflammation sufficient to cause its sides to adhere. Now, if this be sufficient, the use of any injection in a constitution so inflammatory would do too much, and consequently the safe rule is, to try the influence of the external air after the first tapping, and if it fail, to apply some stimulating injection after the second tapping.

WET DREAMS, OR SPERMATORRHOEA.

SOME medical practitioners ignore the existence of this disease, but to me it seems that these gentlemen must have had a limited experience; for so many cases occurred in my practice that I cannot pretend to be ignorant of this malady, nor of its prevalence. I feel, indeed, that it is humiliating to be obliged to admit that some human beings inflict upon themselves such an infirmity; but being aware of the amount of injury caused by it to many individuals, a sense of duty prompts me to notice this melancholy disease.

Schoolboys soon learn from others more advanced in years that the testicles secrete seed, and that this secretion is a distinctive token of manhood. Every boy is anxious to be a man, or, at least, to be thought manly, and many young lads tutored by others, adopt the habit of rubbing the penis, to provoke an emission of seed, which, when accomplished by the youthful experimenter, is considered perfect evidence of his virility.

The fluid emitted at first by this premature excitement is not seed, but fluid secreted by the prostate gland, placed at the neck of the bladder, to secrete mucus to protect the urethra from irritation by acidity of the urine.

Consequently, the first injury inflicted by these precocious youths is hypertrophy of this gland, which, when thus excited to an unnatural action, goes on increasing to such a degree, that in advanced age it is often found enlarged, like goitre in the neck. The prostate gland thus enlarged presses on the bladder, causing a desire to micturate frequently; while it also prevents the urine from passing off freely, so that the bladder is never perfectly emptied. The portion of urine remaining, therefore, in the bladder becomes decomposed, causing a sediment in the chamber-pot, and giving off an unpleasant odour, when it stands any time.

The testicle, like the female bosom, should remain dormant till

called into action by the natural results of marriage; but when prematurely excited by the habit alluded to, seed is secreted, and its presence in the seminal ducts keeps up a constant succession of unchaste desires, and renders the unfortunate victim of this pernicious habit a perfect slave to this degrading vice.

The mind, ever active, even while we sleep, repeats the impressions of the day, and by dreams causes an emission of seed, popularly called "wet dreams," or spermatorrhœa.

The effects of this habit are lamentable, because unnatural excitement is immeasurably more wasting and injurious than matrimonial intercourse. And every breeder knows that the young male of all animals must be kept apart for a sufficient length of time, else his development will be imperfect, and his offspring will degenerate; and similar effects are observed in the human race, when Nature's laws are transgressed in this respect.

Its influence on the mind and intellect is still more deplorable. The nervous system soon suffers, and the devotee to this unnatural practice becomes morose, timid, distrustful, and subject to palpitation of the heart on any sudden emotion, while the intellect is weakened, and the disposition rendered unamiable. One case of incurable epilepsy, or falling sickness, which terminated in idiocy, seemed fairly attributable to this destructive habit.

When prone to this vice, and suffering from spermatorrhea, men, if they be not woman haters, are generally incapable of loving. Their unnatural practice inculcates no higher aspirations than a morbid appetite for sensual gratification. For the beauties of the female mind, and kindly disposition, as the great source of woman's loveliness, they have no discernment, and as little relish. Their juvenile precocity and practice, in place of establishing their virility, have tended only to effeminate them.

A few patients of this class, who had never attended a public school, told me that they acquired the habit which induced spermatorrhœa by the promptings of servant boys, which shows the danger of allowing young lads to associate with servants.

Treatment.—Tonic medicine, to improve the state of the stomach and nervous system, is always useful; and a wineglassful of infusion of camomile, chiretta, or quassia, has a good effect; but stimulating food and drink should be avoided, and the use of tobacco in any form is pernicious to such patients. Constipation of the bowels aggravates this disease, and should be prevented by taking two grains of aloes and ten of Epsom salts, in a little syrup, at night, when required.

The nightly emissions seldom occur unless the person sleeps on his back, and to prevent this a large piece of corkwood, or other firm substance, should be tied on the lower part of the spine, to awaken the patient if he turn on his back.

A shower bath every morning, or sea-bathing in the season, is very serviceable ; while the person should be careful to sponge the privates with cold water every night before retiring to rest, and again during the night if he be awake.

In some obstinate cases, accompanied with enlargement of the prostate gland, I have seen great benefit derived from a blister, one and a half inches long by one inch broad, placed on the space between the testicles and the fundament, and repeated two or three times, or oftener, in succession.

But to benefit by any means, all unchaste thoughts must be banished, the habit of handling the penis must be discontinued, and constant exercise should be taken in the open air. And when unoccupied by business or exercise, the mind should be engaged by reading history or travels of an interesting kind ; but all sensational novels should be proscribed.

Marriage is the cure most to be relied on, and when circumstances are favourable it should always be adopted, because early marriages are conducive both to health and longevity. The wedded union of the sexes is the law of Nature, and those who neglect this golden rule seldom enjoy real happiness.

It is too true that all married couples are not happy ; but this is caused, in every instance, by marriages being badly assorted. The educated cannot enjoy the society of the illiterate, nor can persons of refined taste live happily with those of rude and slovenly habits. Beauty, too, must fade and lose its attractions ; nor is a large fortune to be depended on for matrimonial happiness ; but moderate means of support cannot be dispensed with, and are absolutely necessary for conjugal comfort. But with the latter, and minds well regulated, not expecting unmingled bliss here, but looking on our present state as merely the tutelage for higher and more perfect felicity in heaven, marriage holds out the most certain prospect that we can have of happiness on earth.

THE CHEST.

THIS part of the body is separated from the abdomen by a large transverse muscle, called the diaphragm. The right side of the chest

is occupied by the right lung, which consists of two lobes; and the left side contains the left lung, together with the heart, which is situated between the left lung and the stomach, from which it is separated by the diaphragm.

The office of the lung is to admit the air we breathe, and by the oxygen contained in this air to invigorate and renew the venous blood sent to the lungs for that purpose.

The lungs consist of a network of cellular substance, very similar to a porous sponge, and are traversed by a multitude of small air-tubes which terminate in them, and also by numerous bloodvessels, which convey the blood to and from the lungs.

As we cannot exist many minutes without breathing, the lungs are constantly exposed to the bad effects of atmospheric changes and vicissitudes of temperature, causing congestion and inflammation to be dreaded in any part, but particularly dangerous in this vital organ.

INFLAMMATION OF THE LUNGS.

This, like other inflammations, may arise from exposure to wet or cold, sending an increased quantity of blood from the surface to the internal organs; but it may also supervene from an attack of catarrh of the air-tubes, which we have noticed already. It is, however, by no means a very frequent sequel of catarrh, which often terminates without involving the substance of the lungs; but the opposite may be asserted of inflammation of the lung, which never exists without implicating the air-tubes.

Inflammation of the lungs sometimes sets in insidiously, without any marked cause or premonitory symptom; but generally there is pain of chest, difficulty of breathing, increased action of the heart, the pulse being above 100 beats in the minute; also thirst, headache, loss of appetite, and great prostration of strength.

If one lung only be affected, it is generally the right that is seized; but the left may be attacked, or both may suffer at the same time. When the inflammation is severe the fever keeps pace with it, and delirium supervenes, which is always an unfavourable symptom.

If attended to in proper time the effused lymph will be absorbed, and the inflammation will terminate by "resolution;" but when it is neglected, suppuration, destruction of the substance of the lung, and a fatal issue may be expected.

The early internal symptoms can be detected only by the use of the stethoscope, and as I write for those who are not versed in the distinction of "rales," it is unnecessary to allude to them.

Externally we have evidence that is always reliable. For the expectoration during inflammation of the lung is so peculiar that seen once it cannot be mistaken. It consists of mucus and blood, so mingled as to be of the colour of rust of iron ; and is called "rusty expectoration."

In catarrh of the air-tube there often appears mucus with a streak of blood in it, obtained from some vessel in the air-tube, or in the throat ; but "the rusty expectoration" of inflammation of the lungs seems to have been combined in the air-cells of the lungs, as by a pestle and mortar, and is perfectly distinctive of this disease.

This expectoration has also another characteristic feature. It is glutinous, ropy, and adhesive. When you turn the vessel containing it to one side you find it adheres ; and the amount of adhesion gives tolerably true evidence of the progress and extent or severity of the inflammation.

Treatment.—Bleeding from the arm to syncope, followed by large doses of calomel and opium, was formerly the treatment adopted for this disease. But experience has latterly convinced the greater number of medical practitioners that these remedies can be well dispensed with.

A dozen leeches applied to the chest are serviceable in relieving the pain and difficulty of breathing ; and as an internal means of subduing the inflammation, we can place confidence in tartarized antimony (tartar emetic). Ten grains of tartar emetic should be dissolved in ten ounces of water, of which the patient should take a dessertspoonful every hour for the first day, and then every two or three hours, until the rusty expectoration disappears.

At first this dose may cause sickness of stomach, and if so it does a service ; but after a few doses it ceases to sicken, and seems to act merely on the disease. It generally operates on the bowels, rendering any aperient unnecessary ; but should it not do so, a dose of salts (half an ounce) should be taken, when required. Some combine laudanum with the tartar emetic ; but I have seen the best effects and speediest recoveries when this was omitted.

If the bowels become irritable, twenty minims of laudanum, mixed in a dessertspoonful of sweet oil or milk, and thrown up into the bowel by a small syringe, is the best form of anodyne.

The horizontal position and perfect rest in bed is absolutely necessary, until recovery is perfected. Reaction of the skin is also important, and a hot bath for the feet and legs every evening, together with a sufficiency of covering to retain heat, should be adopted. In

addition to this it is often necessary to apply bags filled with heated salt, or a footpan filled with hot water and rolled in flannel, to secure warmth in the extremities. And frequent mustard plasters over the chest hasten the improvement.

The drink should be toast-, barley-, or rice-water, and ten grains of nitre should be given in such drink every six hours, to act on the kidneys. The food should be entirely farinaceous, as rice, sago, arrowroot, or light gruel, boiled in water and eaten with a little milk; stimulants being inadmissible.

As soon as the rusty expectoration disappears, the tartar emetic should be discontinued; and in place of it the patient should get half a teaspoonful of the acetate of ammonia in a teacupful of toast- or rice-water, every three hours, alternately with the nitre.

And when the expectoration becomes free, and consists of pus only, beef or mutton tea, with rice or stale bread, should be given once or twice a day, according to the appetite; together with a tonic, as one grain of quinine, or, if this cause headache, a wineglassful of infusion of chiretta or quassia, once or twice a day after food.

HEPATIZATION OF THE LUNG.

After the inflammation subsides there often remains a condensed state of the lung, called hepatization, because that portion of the lung is impervious to air, and solid like the liver. This condensation of the lung may be induced by patients being too anxious to get out of bed, and to return to solid animal food before they are in a fit state to bear it, or by a slight chill or exposure to a current of cold air.

Treatment.—The iodide of potassium, in two-grain doses in a glass of water after food thrice a day, is the most efficient remedy that I have tried for removing this condensation, and if applied in good time it seldom fails. A blister, frequently repeated, over the affected part hastens the improvement; but as some constitutions are injuriously affected by the poison of the blistering fly, an eruption kept up by the occasional application of croton oil, rubbed over the chest, has a good effect, and may be preferable.

Frequent tepid baths, either shower or plunge, with plenty of friction afterwards, by increasing the action of the skin, are very salutary, and prepare the patient for taking gentle exercise on horseback when the weather is fine.

HÆMORRHAGE FROM THE LUNGS.

Bleeding from the lungs is frequently a precursor of consumption, but it may also be caused by disease of the left side of the heart, preventing the free return of the blood, and consequently causing congestion of the lungs; or by an ulcer of the mucous membrane of the air-tube, producing the rupture of a bloodvessel. It is recognized by the blood being coughed up, and not vomited as from the stomach. It is always an alarming symptom, being highly calculated to reduce the vital powers, and should, therefore, be checked as soon as possible.

Treatment.—Perfect rest and strict silence are the first things to be secured. As a popular and immediate remedy, I have seen decided benefit from a dessertspoonful of table salt, taken into the mouth and swallowed dry, and then followed by a wineglassful of cold water. This seems to act by exciting slight nausea at first, and afterwards as an astringent.

The medicine that is most worthy of confidence, in my estimation, is tannic acid, given in five-grain doses, in pill or syrup, every two hours till the loss of blood is checked, and then every four, six, or eight hours till hæmorrhage ceases. Gallic acid, in similar dose, is also a good astringent, and produces nearly the same effect.

The drink should be perfectly cold, and a small piece of ice swallowed occasionally is serviceable.

The food should be entirely farinaceous, such as advised for in inflammation of the lungs; and the bowels should be acted on by Epsom salts, say half an ounce, as required.

Persons who have had an attack of hæmorrhage from the lungs should in future be careful to avoid every exciting cause, such as extremes or sudden changes of temperature; talking much; singing; leaping; straining; any violent muscular effort; or playing on any wind instrument. They should abstain from all alcoholic beverages; and avoid rich, indigestible food, and crowded assemblies.

PHTHISIS, OR TUBERCULAR CONSUMPTION.

THIS is a very common and fatal disease. Its name signifies wasting, and the addition of tubercular implies such wasting as results from tubercles or pellets, often not larger than mustard seeds, forming in the lungs, and also in other internal organs.

It is a common opinion that persons of a fair complexion, with large blue or gray eyes, dilated pupils showing insensibility of the retina or nerve of the eye, dilated nostrils, elongated upper lip, clubbed fingers, with nails curved at the point or bending over the fingers, and a peculiar rosy blush on the cheek, are marked subjects for consumption. But in this, as in other diseases, no general rule holds invariably; so that we occasionally meet with persons having the greater number of the above symptoms who have lived to a good old age without suffering from phthisis or consumption.

A contracted chest, commonly called pigeon-breast, is also considered a sure indication of this disease in the constitution; but this, too, is fallacious, and experience teaches us that the most expansive chest is occasionally the seat of consumption, and that a dark complexion gives no protection against the inroad of this common enemy of our race.

The formation of tubercles depends on a peculiar state of the constitution, in which the blood deposits small pellets of inorganic matter in the air-cells, on the mucous membrane of the air-tubes, and also of the bowels, and frequently in the spleen, kidneys, liver, and even the heart itself.

When this state of constitution prevails, no form of chest, nor hue of complexion, can indemnify the individual; for any of the exciting causes, as want of proper nourishment, prolonged lactation, excesses of different kinds, exposure to cold, too much study, overfatigue, or depression of spirits, may usher in the attack. And, on the contrary, if the constitution have not the tubercular tendency, exposure to these or any of them, will likely induce disease of some other kind, but not consumption.

Why the blood should form these deposits in one constitution and not in another, we are yet ignorant. Examinations after death have long established the fact of their presence; but the original cause that produces this tendency in the constitution remains still to be discovered.

Attempts have been made lately to exclude this disease from the list of hereditary taints, with which opinion I cannot coincide. It is true that all the cases that came under my care could not be traced to this origin, but the majority were evidently such; and more, I am convinced, would have been traceable, were it not owing to shortness of memory, and an unwillingness on the part of patients and relatives to be communicative on this particular subject.

But phthisis, like other hereditary diseases, does not descend

regularly to every generation. It may pass over one or even two generations, and when it appears in a third, its genealogy may really be forgotten. Nor do I mean to assert that its origin may not be primary in any given case.

My experience has, however, convinced me so fully that it is hereditary, that a sense of duty impels me to dissuade any person, either male or female, who inherits any tendency of that kind, from forming a matrimonial alliance with any relative, even distant, or with any family of a similar constitution. Because if either father or mother be free from such taint, the children may be healthy; but when both have constitutions of this peculiar bias, their offspring have little prospect of sound health, fitted for the enjoyment of life.

Considerable difference of opinion exists also respecting the communicability of this disease, some thinking that it is infectious, while others assert the opposite. From all I have seen, there is not sufficient reason to consider it contagious. There is nothing taken from contact with the patient, nor from the diseased portions thrown off by coughing; but the breath exhaled from diseased lungs is offensive to our sense of smell; and we should attend to this monitor, which warns us that we cannot with safety continue to inhale such an atmosphere, and that we should avoid it.

Every patient, whether married or single, should have a separate bedroom after tubercles soften and begin to be expectorated; and a sister, cousin, or wife showing any tendency to consumption should not be allowed to nurse a patient in the last stages of this disease.

The internal symptoms of phthisis can be estimated only by the use of the stethoscope and an educated ear, and to enumerate them could not be generally useful. But the external appearances are:— hæmorrhage from the lungs, setting in without any apparent cause; a short dry cough made with little effort, as if to clear the throat; a pulse above 75 in males and 85 in females; frequent wandering pains about the chest and back; an unusual susceptibility of cold; an evident want of stamina in the constitution, which is easily depressed or fatigued; emaciation without loss of appetite; an unusual flush on one or both cheeks, occurring towards evening; nightly perspirations affecting the chest and body chiefly; and a falling in or hollowness at the upper part of the chest, generally on the left side.

Treatment.—If these symptoms be attended to early, much may be done to arrest the progress of phthisis. Abstinence from violent

exercise, alcoholic stimulants, and exposure to cold or sudden changes of temperature, will prevent a return of the hæmorrhage ; mild nourishing diet will improve the pulse ; early hours and plenty of exercise in the open air, on horseback or by carriage, will brace the constitution ; sponging the chest and body with vinegar and warm water for a few days, and then using the shower bath, tepid in winter, and cold in summer, with plenty of friction afterwards with a flesh-brush or coarse towel, will lessen the susceptibility to cold, and the wandering pains of chest. Cod-liver oil, taken in teaspoonful doses, after meals, thrice a day, for a week, and then increased gradually to a tablespoonful as often, will soon check the emaciation ; and twenty minims of diluted sulphuric acid, in a teacupful of tepid water, taken at bedtime, checks the night sweats. The acid should be drunk through a glass tube or quill to protect the teeth, as it would blacken them and destroy their enamel. Acid is the best remedy for perspiration when it is the result of feverishness, and known as "warm perspiration ;" but when it is caused by weakness, and is a "cold perspiration," I have found more benefit from two grains of the oxide of zinc, or, still better, the valerianate of zinc, given at night in pill or in a little syrup, as the patient prefers.

If the patient can, at this early stage of the disease, make a long sea-voyage in the summer season, and select a mild genial climate for his future residence, the progress of the disease may be arrested ; the tubercles already formed may remain dormant ; and, with proper care and attention to his health, he may live to a good old age. He must not expect, however, to be able to indulge in violent exercise, or laborious business of any kind. He must be satisfied also to forego many of the so-called pleasures of society—large assemblies and late hours—and be content to lead a retired quiet life.

It is rare, however, to find patients inclined to adopt such measures in the early stage of phthisis. To be full of hope is one characteristic feature of persons suffering from this disease in any form, especially at its commencement. Patients will draw a full breath, tell you they feel no pain ; are quite fit to enjoy society ; have no taste for travelling ; cannot bear the idea of being separated from their early associates and friends ; and only require a little medicine to make them quite well.

Every medical practitioner knows also that the early symptoms in every case are deceptive, and the issue very doubtful, because a small portion only of one lung may be affected with tubercles, which, having softened, and been thrown off by expectoration, the patient

may have a respite for some years, and die in the interval of fever, or some other disease. In this way I and many others have got credit for curing cases of phthisis, while the disease was still in the constitution, and must have proved fatal in the end, if longer years had been granted to the individual.

Instances of this kind, together with the entreaties of patients and relatives, induce medical practitioners often to act contrary to their own judgment, and to continue to treat patients at home under unfavourable circumstances, because they know there is something very chilling in the appearance of strange faces, and the absence of wonted comforts, that detracts largely from the advantages of travelling and change of climate.

After the disease has advanced to the second stage, and suppuration of the tubercles is established, no motive should induce medical advisers to encourage a patient to leave the comforts of home and the care of his friends.

A sea voyage is often trying to those in health, but it requires one to have witnessed their sufferings to be able to sympathise sufficiently with poor invalids, tossed about by the merciless billows, half-starved by reason of the solid sea fare being too gross for their delicate state, and nauseated by the sight of tea, coffee, or any fluid food that can be got on shipboard.

Nor is their fortune much improved when they arrive at a foreign port. Servants at hotels have little leisure and less taste for waiting on invalids. The bustle and noise of an inn are also distressing to them. At an early hour, when they could get sleep, they are constantly disturbed, and towards morning returning cough deprives of both sleep and rest.

Lodging- and boarding-houses are little better, a stepmother's breath seems to permeate them all, so as to chill the invalid to the centre on his entering them. Despondency of spirits never felt at home by such patients is now certain to be added to his former sufferings, and the constitution, under these unhappy influences, sinks apace, and the miserable sufferer, in place of having his health renovated by change of climate, hastens to a premature grave.

Such has been my experience when making six voyages to and from England and Australia. And when practising in the latter country I observed that patients who arrived in the first stage of the disease were improved, and enjoyed a respite for some years, but those who came after softening had commenced, were carried off sooner than would be the average duration of such cases in Europe, even under unfavourable circumstances.

Persons attacked with phthisis in Australia, whether natives of the country or emigrants, follow in the same course. The climate, although favourable to the enjoyment of health, is relaxing to invalids, and hastens the softening of tubercles, and consequently the fatal issue of the case.

By post-mortem examinations of the lungs of phthisical subjects, it has been found that tubercles which had remained dormant for some years had been reduced to a solid earthy state, similar to lime. And this led some physiologists to conclude that by introducing lime into the constitution all tubercles would be consolidated, and remain latent afterwards.

This theory has been acted on, and chloride of lime has been largely prescribed in France, England, and Australia. Some place confidence in this remedy, and I have seen it of essential service in checking the diarrhoea, so wasting in the latter stage of the disease; but its effects in other respects have not been sufficiently tested to enable me to recommend it for any other purpose than to correct lax.

The inhalation of medicated vapours was a popular remedy which attracted much notice about forty years ago. The theory stated that by this means the medicine was brought into immediate contact with the diseased part of the lung, and must of necessity effect a cure.

Having been taught by Professor Allison, of Edinburgh, that the science of medicine was progressive, and that we must still be learning, and being full of energy in the pursuit of knowledge, when I commenced practice in 1832, I gave the system of inhaling a fair trial. One of my early patients was a gentleman whose education enabled him to appreciate any means that seemed scientific, and whose circumstances enabled him to devote the necessary time—three hours a day—to the use of this remedy. But to him it was of no service. His case terminated fatally, and quite as soon as it could have done without the aid of medicated vapours. Some others of my patients tried it with less assiduity, but none with real benefit, while to a few it was positively injurious, by increasing their cough and fatiguing them. And in every instance I was convinced that the time occupied in inhaling would have been better spent by riding or driving in the open air.

On examination after death as to the cause of failure of this remedy, it was evident that the theory could have originated with no other than a superficial observer, because the first action of the disease is to block up the air cells and the termination of the small

air tubes leading to these cells, so that it is impossible for medicated air, or any other vapour, to get into contact with the tubercles or the diseased mass ; and, consequently, more effectual remedies can be applied externally, through the skin, or internally, by the stomach and the blood.

The projectors of this plan seem to have forgotten that the tubercles deposited on the mucous membrane of the bowel, by blocking up the absorbents, and thus starving the patient in the midst of plenty, form perhaps the worst feature of phthisis, and claim special attention in the treatment of such patients.

Now, to obviate this difficulty and to nourish the patient, cod-liver oil, after many trials in different countries, has proved more effectual than any other remedy, especially when given in tablespoonful doses, twice a day, together with two grains of the iodide of potassium, once a day, in a wineglassful of water, after food.

The diarrhoea produced by the ulcers formed by tubercles suppurating in the bowels is very wasting and distressing to the sufferer. To check this, a mixture should be made of three drachms of precipitated chalk, three ounces of water, one ounce of tincture of catechu, and three drachms of laudanum ; and of this a teaspoonful should be taken after food thrice a day. But as soon as the diarrhoea is checked this astringent mixture should be given less frequently ; perhaps at night might be sufficient.

The perspiration in this disease is often so severe that the patient dreads going to sleep, which always increases it, and it is so wasting as to have obtained the name of "colliquative sweats." In some cases when twenty minims of diluted sulphuric acid, taken in half a tumblerful of warm water, through a glass tube thrice a day shortly after food, failed to control the perspiration, I have seen great benefit from two grains of the valerianate of zinc, or two grains of quinine, given in a little syrup each night.

Alcoholic fluids taken in the early stage of this disease are injurious, and cannot be recommended ; but when the patient becomes emaciated and weakened, he sometimes craves for a little porter or port wine, which if it adds to his comfort, and does not increase the diarrhoea, may be granted.

This is not a disease to be cured by confinement to bed. On the contrary, while strength permits, and the weather is favourable, phthisical patients should spend a part of each day in the open air ; because having, perhaps, a portion only of one lung fit to breathe with, they cannot inhale sufficient oxygen to vivify the blood, in a

small room badly ventilated, and should be as much as possible in the open air, when dry and favourable, and when out of doors should always be moving.

Such patients cannot be too careful of their food and drink; both should be very mild and easily digested, and the stomach should never be overloaded. Frequent tepid baths or sponging the body with tepid water, followed by friction, are salutary, and increase the comfort of the patient.

ASTHMA.

THIS is a disease of the air-tubes, and might have followed the article on catarrh but for our wish to notice first those affections which are of most frequent occurrence. It is generally considered one of our hereditary diseases; but the evidence in support of this opinion is by no means satisfactory.

It is evidently spasmodic, and in some instances entirely nervous in its origin, as in many persons who had suffered from it during life no trace of organic disease could be discovered after death. But in a few instances it has been found associated with disease of the lungs or the heart, to which its attacks might reasonably be attributed.

Of all diseases, asthma is the most capricious. For patients suffering from other affections we can generally recommend a place of residence suited to the constitution and the malady, but no experience can enable us to do so generally for asthmatic patients; for one will be free from attacks while in a low damp locality; another on the summit of a hill, in a dry, bracing atmosphere; one can enjoy best health in a crowded city; another in the open country; one is improved by travelling, and variety of scene and air; another dreads the idea of changing his bed, even for a night; while some suffer by removal from one side of the same street to the opposite, or from a back to a front room in the same house.

Trial alone can assure us of what will best suit any asthmatic subject; and the safest direction in every instance is to advise the opposite of that which has been formerly found to disagree with the patient.

Although asthma is a nervous disease, yet men suffer from it oftener than women. An attack comes on generally at night or towards morning. Occasionally there are some premonitory symp-

toms, as headache, flatulence, or depression of spirits; or the person may be seized when in high spirits, and the enjoyment of perfect health, owing to some fortuitous circumstance, some atmospheric change, or the influence of some peculiar odour, and as one of these exciting causes, the perfume of ipecacuan is known to be powerful.

During the attack, which may continue only for a few hours, or perhaps three or four days, the sufferings of the patient are intense, for owing to the contraction of the air-tubes he is being suffocated, as in a prolonged death struggle. If taken while asleep, he starts up immediately to a sitting position, holding his knees in order to make a greater effort to fill the lungs with air, or he will rush to an open window, and remain for hours exposed to the chilling wind of a cold, bleak, winter's night.

Having frequently found patients exposed in this manner, or sitting in a thorough draught between an open door and window, their extremities cold as ice, and their bodies covered with cold perspiration, it seemed difficult to account for the little injury that resulted. It must be attributed to the intensity of the suffering diminishing their susceptibility at that time. Under other circumstances, such exposure would likely be followed by fatal inflammation of the lungs; nor do we think it can occur with impunity during asthma. On the contrary, it must aggravate the attack, and prolong its duration.

Attacks of this kind are usually periodical, recurring at intervals of weeks or months, but those who suffer less violently have returns oftener. Some sufferers are never free from threatenings, so that they can never venture to adopt the recumbent position, and can enjoy sleep only when sitting and leaning forward, as at a table with a writing-desk and pillow on it.

Treatment.—This disease follows the general rule, and if the attack be anticipated, it can be warded off; but if it has been fairly established, it is among the most difficult to control, and our remedies are too often ineffectual.

Some of my patients being instructed, when feeling at evening the usual premonitory symptoms, to take a hot bath at 102° Fahr., sleep between blankets, and take ten grains of Dover's powder to encourage perspiration during the night, have escaped the attack, and returned next day to their wonted pursuits. But some persons do not like this trouble, and many get no previous notice or warning.

To these my advice was to be very careful of their digestive organs; never to eat indigestible food; not to allow the stomach or

bowels to be overloaded ; strictly to avoid suppers ; to abstain from alcoholic drinks, especially ale and porter ; to sleep in an airy apartment, the bed being out of the draught ; to eschew exposure to sudden changes of temperature, and musty, disagreeable odours ; and to have a shower bath every morning, tepid in winter, and cold in summer, with plenty of friction.

A few dyspeptics escape an attack of asthma by swallowing one or two of the seeds of garlick, familiar in Britain, when going to bed ; and if they be not chewed the breath is not affected. And ten or a dozen seeds of capsicum, plentiful in Australia, when taken at night, serve some.

For checking the spasms of the air-tubes and abating the sufferings during the attack, hydrocyanic acid, in two-minim doses, together with a teaspoonful of syrup of squill, taken every two hours, and a teaspoonful of the acetate of ammonia in a teacupful of warm toast-water, taken also alternately with the hydrocyanic acid every two hours, so that one would be taken every hour, is the remedy I have found most useful. As soon as the sufferings abate, the medicine should be given less frequently—every four, six, eight, or twelve hours, or at night only, as required. The bowels should be unloaded by an enema of soap and warm water every morning and evening. The food should be very light, and the drink equally so.

The tincture of lobelia, twenty minims in a wineglassful of coffee, given every two hours, is also an efficient medicine, and does well in some cases.

Chloroform is a powerful antispasmodic, but its use is too hazardous to allow it to be recommended as a family medicine.

Stramonium, the leaves and stems being put into a pipe and smoked like tobacco, acts admirably in checking an attack with some persons, and the earlier it is applied the effect is the more marked.

The fumes of nitre also relieve many. For this purpose narrow pieces of blotting-paper should be dipped into a saturated solution (as much as water will dissolve) of nitre, then dried and kept for use ; and one of these pieces of paper, burned in the centre of the room in any earthen vessel, is sufficient to try the effect, which, if serviceable, can be repeated at pleasure.

With some a cup of strong coffee acts almost like a charm ; while to others it seems rather injurious. No specific has yet been discovered for this disease, nor does the same remedy suit every case. In this disease, as in many others, experience is the best guide.

PLEURISY.

THIS is another disease of the chest, which often causes a great deal of pain, and if neglected may produce permanent injury to one or both lungs, and a protracted death, after months of suffering.

The pleuræ are two serous membranes, one on each side of the chest, and being double, they have been aptly compared to a double night-cap. One side of each pleura is attached to the inner surface of the ribs, while the other side envelopes each lung. And, as every serous membrane secretes a small quantity of fluid, sufficient to lubricate its surfaces, by this beautiful arrangement of the Allwise Creator, our ribs, constantly elevated and depressed in the act of breathing, pass over the lungs without the possibility of injury by friction.

But such membranes when inflamed throw out also coagulable lymph, that may cause them to adhere or grow together, and thus destroy their former adaptation for their office of protecting the lungs and facilitating their motions. Any adhesion of this kind causes pain in breathing, and produces the familiar "stitch" in the side.

When inflamed they may also throw out large quantities of fluid, called effusion into the chest, or dropsy ; filling the pleural sack or nightcap, so as to compress the lung, and render it impervious to air, and incapable of supporting life.

Such inflammation, or pleurisy, may be caused by external injury, fracturing a rib, and forcing the broken bone through the pleura, or by inflammation of the lung itself, extending to the pleura ; but it is more frequently the result of exposure to wet and cold.

The symptoms of pleurisy are severe pain of that side of the chest, felt especially at one point, about the centre of the rib, between the spine and the breastbone, and so severe that the patient can scarcely breathe ; accompanied with slight dry cough, excited pulse, and considerable fever, ushered in generally by a rigor or shivering-fit.

Treatment.—The measures adopted formerly for this disease were large bleedings from the arm, followed by mercury combined with opium, as was customary for treating inflammation of the lungs. But experience has shown that these remedies are better dispensed with.

At the commencement of the attack the patient should get a hot bath at 102° Fahr. for half-an-hour ; to be followed by ten grains of

Dover's powder in a little syrup, to be repeated every eight hours till pain of side abates ; and ten grains of nitre in a teacupful of warm toast-water every two hours after the Dover's powder, so as to act on the kidneys. But tartar emetic, so serviceable in inflammation of the lungs, produces no good effect on pleurisy. In the absence of a hot bath mustard plasters are serviceable.

If the pain continues after a second dose of the Dover's powder, half a dozen or a dozen leeches, according to the strength of the patient, should be applied over the seat of pain, and repeated every day till pain abates, the pain being soothed in the intervals by fomentations with flannel wrung out of hot water.

As soon as the pain abates the Dover's powder should be withdrawn, and given at night only, until recovery is perfected ; but the nitre should be continued at least every four hours.

Should difficulty of breathing or a feeling of weight or discomfort in the side continue after the pain leaves, there may be fluid in the chest, which will require a repetition of fly blisters to remove it, together with two grains of the iodide of potassium, taken in a wine glassful of water, after food thrice a day.

The patient's drink should be toast-, barley-, or rice-water ; and the lighter the food is, the person will recover by so much the sooner.

The absence of pain, or a remission of it, should not tempt the patient to leave his bed for some days, until all feeling of uneasiness about the chest has gone off. And the patient must live moderately for some time, avoid the use of stimulants and exposure to damp or cold air, lest a relapse be incurred.

THE HEART AND ITS FUNCTIONS.

THIS important organ occupies the lower part of the left side of the chest, being seated below and in front of part of the left lung. It is composed of muscular fibres, and is divided into four partitions ; two at its apex, the walls of which are thick and powerful, called the ventricles, and two at its base, called the auricles, which are less muscular. These pairs always act in unison : the two auricles contract at the same time, and the two ventricles follow the same rule.

The auricle on the right side of the heart receives the venous blood, brought from the lower extremities by the large vessel called the portal vein, that passes up between the lobes of the liver, as well as

from the upper extremities by the jugular vein; and at the same moment the left auricle receives the arterial blood coming from the lungs, where it has received a supply of oxygen.

Both these auricles contracting at the same time, send their contents into their respective ventricles, which, contracting in their turn, send the venous blood on the right side to the lungs to be renewed by oxygen, and the arterial blood on the left side to invigorate and nourish the entire constitution.

As this indispensable organ, in order to support life, must be constantly in motion, it is surrounded by a serous membrane to prevent injury by the continued friction, and both the heart and its covering are subject to disease.

PALPITATION OF THE HEART.

Although this is not the most important affection of this organ, yet it is most frequently met with, and, following our rule, we shall notice it first.

The muscles of the heart, like those of the stomach and bowels, being involuntary agents, and not guided by our will, their action, when natural and perfect, should not be cognizable by our senses, so that to be perfectly healthy we should not be conscious of the labours either of our stomach, bowels, or heart.

Palpitation of the heart signifies an action increased either in frequency or force, or both together, so that we are made aware, and sometimes painfully sensible, of the heart's impulse.

With some the beat of the heart is so frequent that it causes a tremulous motion of the whole frame, while others have the impulse so loud that it is audible, not only to the individual, but also to persons who may be at some distance.

It is pleasant, however, to know that palpitation is generally a deranged action only, while the organ itself may be free from disease. And it is often casual and temporary, as when a person runs up-hill. Here the increased action of the muscles hurries the venous blood from the extremities to the heart, the increased frequency of breathing keeps up in the lungs the arterialisation of the blood, and, as the heart is always alive to this impulse, it acts or beats in proportion. But a little rest at the top of the hill soon alters this excited action, and the heart returns to its natural motion.

The action of the heart varies considerably in different constitu-

tions, and at different periods of life. In youth it is more frequent than in adults, and likewise in women than in men.

The pulse, which is easily felt at the front of the wrist, about an inch below the last joint of the thumb, ranges from sixty to seventy beats in the minute with men, and from seventy to eighty beats in the minute with women. The first of these numbers for each sex generally indicates the better constitution, but a few additional beats are not important.

The action of the heart is very much under the influence of the nervous system, and also of the mental emotions, as fear or passion. It is also impelled and increased by the use of stimulants, and by the formation of more blood than is absolutely necessary for the constitution.

Many a lady keeps up constant palpitation from anxiety about an absent husband, a beloved daughter, or perhaps a worthless son; and many of both sexes accomplish the same thing by living too luxuriously, eating pastry and other rich, indigestible food, and not taking exercise.

Although palpitation may only be a deranged action, yet it must not be encouraged, or perpetuated, because if continued it must finally induce disease of the organ. Increased action of any muscle attracts additional blood or nourishment to that muscle, and thus enlarges its growth; and in this way constant palpitation might cause a very serious and intractable disease, enlargement of the heart.

Treatment.—The medicines which have most influence on this affection are hydrocyanic acid and digitalis. Two drops of hydrocyanic acid in a wineglassful of water every eight hours, or ten drops of the tincture of digitalis taken as often, thrice daily, seldom fail in lessening palpitation. Both of these are active medicines, and their action requires to be watched, and as soon as it begins to affect the pulse it should be given less frequently, say every twelve or twenty-four hours, or omitted for a day or two.

Tea being a nervous excitant, and coffee still more so, their use is not admissible while palpitation annoys, and tobacco must also be prohibited. Sensational novels and all causes of mental excitement must be guarded against, and shower baths and exercise in the open air cultivated.

SOFTENING OF THE HEART, OR RAMOLLISSEMENT.

This disease is the result of degeneration of muscular fibre, which commonly affects the entire system, but it is especially fatal when it

prevails in the kidneys, as in Bright's disease, or in the arteries of the brain, causing apoplexy; or in the base of the brain, creating loss of nervous power; or in the heart, producing rupture of this organ.

The muscles appear pale and flabby, the fibre degenerating to a texture more like fat than muscular tissue. This change of structure is gradual, and without pain, so that it may exist for a considerable time before the patient is aware of it.

It may be caused by the abuse of alcoholic stimulants, by intense study, by anxiety of mind, and by other means which undermine the constitution.

Between the age of fifty and sixty the senile arch above the pupil of each eye, which soon increases to a white circle around the pupils, gives the first indication of the presence of this disease. The general health, meanwhile, is not affected, but the action of the heart is weakened, the pulse becomes slower, and palpitation is produced by any excitement or unusual exertion.

Of the fatal cases that have been recorded, the left ventricle was the part most frequently ruptured, but any of the walls of the organ may be affected, and the degenerated muscle, losing its power of resistance, yields to the pressure of the blood, and becomes gradually thinner, until it finally bursts, and the patient, without poetic figure, dies of a broken heart.

In our day two distinguished men, Dr. Chalmers and Dr. Abercrombie, of Edinburgh, were carried off by this disease, the one at sixty-five and the other at sixty-eight years of age.

But the senile arch over the pupils is not always associated with softening of the heart. It occurs in many instances as a symptom of age, without this disease, and it is only when accompanied with increased debility and diminished action of the heart that it is ominous of evil.

Art has discovered no means of restoring to a healthy state muscle that has been altered by fatty degeneration. The most that can be hoped is to retard the progress of the disease, by light nourishing food, abstinence from stimulants, freedom from anxiety and study, good air and moderate exercise. Such patients require to live by rule, and avoid every kind of excitement.

HYPERTROPHY OF HEART.

Enlargement of the heart is a very intractable, but, fortunately, not very common disease.

The average size of the human heart weighs about half a pound; but when hypertrophied it sometimes increases to be five pounds weight, and beats with such violence as to make the whole frame vibrate at each impulse.

The effect of a current of blood sent with such force to the lungs and brain is exceedingly perilous, and quite opposed to the security of life; and as starvation—a very unpleasant remedy—is the only one that has any influence in controlling or removing enlargement of the heart, everything tending to promote such disease, such as rich food and alcoholic drinks, should be carefully avoided.

If we tie up one arm, as in case of fracture, and use the other only, we find, in a few weeks, that the muscles of the arm exercised have increased, while those of the other arm have diminished. Nor is the heart any exception to this general rule, for everything which increases its action has a tendency to increase its growth, and produce hypertrophy of this organ.

Palpitation should, therefore, be soothed and controlled by every means in our power; and persons prone to it must avoid every exciting cause.

Ladies who are endowed with extreme sensitiveness must endeavour to educate and restrain their feelings; and by adopting early hours, and abstaining from tea and coffee, brace the nervous system by much exercise, daily, in the open air, and by the shower bath.

Gentlemen who make blood too largely must deny themselves the pleasures of the table, live abstemiously, and walk a great deal.

But the action of the heart may be increased, also, by some impediment to the free passage of the blood from its cavity; and such obstruction is often caused by an imperfect state of its valves.

Every aperture leading to or from the heart is furnished with a valve to prevent the reflux or regurgitation of the blood, upon the same principle as the mechanical arrangement of a pump; and these valves, so important to the free and perfect circulation of our life's blood, are subject to disease.

In early life the action of these valves is often rendered imperfect by the deposition on their surface of small pellets like warts, as occurs in rheumatic fever, owing to the inflammation of the serous membrane on the outside of the heart being communicated by sympathy to the mucous membrane on the inside of this organ. And in advanced years the valves become ossified or petrified, and obstruct the flow of blood from the heart.

For neither of these affections has Art discovered any cure, and

the only alleviation is by living abstemiously and quietly, avoiding every excitement of mind and violent motion of the body.

PERICARDITIS, INFLAMMATION OF THE PERICARDIUM.

The serous membrane that covers the heart, like all others of this class, secretes a little fluid to lubricate its surface, and thus facilitate the motions of the heart; but when inflamed this membrane assumes a diseased action of a double tendency.

It may throw out a quantity of adhesive lymph, so as to make the coverings unite or grow together, thus destroying its natural use, and impeding the action of the heart; or it may secrete a quantity of fluid so much above what is necessary to lubricate its surfaces, as to produce dropsy of the pericardium, and so obstruct the motions of the heart as to render existence miserable, and death the probable result.

Treatment.—For inflammation of the membranes of the heart, whether internal or external, heroic remedies were formerly adopted. When I commenced the study of the healing art, some fifty years ago, the practitioner would have been reckoned a trifier with human life if he did not, in such cases, bleed very largely, and give mercury with equal freedom.

Experience, which is always preferable to theory, has altered this treatment, and convinced most medical practitioners that milder means are more salutary; and that greater benefit is derived from a hot bath at 102° Fahr. for half an hour, and twenty-four hours of healthy perspiration afterwards by the aid of blankets in place of sheets, and ten grains of Dover's powder given every eight hours, than from bleeding and mercury.

It is true that persons suffering from pericarditis are generally bathed in perspiration; but this is diseased perspiration, resulting from the intensity of the pain. The perspiration which follows the alleviation of pain has a different effect, and a healing tendency. To procure this a warm bath, the temperature being kept up to 102° Fahr. for half an hour or longer, unless faintness supervenes; blankets on the patient's bed in place of sheets; ten grains of Dover's powder given every eight hours in a little syrup to alleviate the pain and produce perspiration; and a teaspoonful of the acetate of ammonia, together with ten drops of the wine of colchicum, in half a tumblerful of toast- or rice-water, every three hours after the Dover's powder, are the means I have found most serviceable.

If the Dover's powder does not relieve the pain after a second dose, half a dozen or a dozen leeches should be applied over the seat of the pain, and the bleeding encouraged by fomenting with flannels wrung out of hot water.

The drink should be toast- or rice-water, and the food arrowroot or ground rice boiled in water and eaten with a little milk. The bowels should be kept acting by two grains of aloes and ten grains of Epsom salts, taken at night, and an enema of soap and water next morning if required.

After twenty-four hours of free perspiration kept up in this manner, if the pain has ceased, the pulse lowered, and the fever abated, it is advisable to give the Dover's powder and the acetate of ammonia with the colchicum less frequently, say every twelve or twenty-four hours, to prevent a return of the pain. The blankets on the patient's bed may also be exchanged for well-aired sheets, and a little chicken broth may be given, with rice or stale bread.

But the patient must not be hasty in leaving his bed, as any exertion on his part, or exposure to cold, might cause a relapse. And during convalescence animal food must be used very sparingly, and of the lightest kind, easily digested.

BREAST PANG, OR ANGINA PECTORIS.

This is one of the most singular diseases that flesh is heir to. It is evidently spasmodic and remittent in its character, without showing any regularity in the period of its attack, as some are taken with it very frequently, and others generally at long intervals.

Men are much more prone to angina pectoris, or breast pang, than women are; and they are generally seized when walking up hill, when making some bodily effort, when excited by passion, or during sleep, especially if the stomach be overloaded with indigestible food.

The peculiar characteristic of this disease is the feeling of annihilation, or dread of instant death, common to every one when attacked with this disease. If seized when walking up hill the patient must stop immediately. His face becomes pallid, his surface is cold, and his joints are feeble. If taken when in bed he is obliged to start up to the erect position, having the impression on his mind that, in another minute in the recumbent posture, he must have certainly expired.

The pain of angina pectoris is always referred to the region of the heart as its origin; but it may extend across the chest, back to the



spine, to the left shoulder, and down that arm even to the fingers of the left hand.

In mild cases the attacks are of short duration, and recur at long intervals; such were the instances that occurred in my practice, none of which proved fatal; but the reverse is the result when the attacks occur very frequently, are severe, and of long continuance.

In fatal cases of this disease I never had the opportunity of making a post-mortem examination, but many such are on record; and, in a large majority of such subjects, the heart was found more or less diseased. In some cases the coronary arteries that nourish the heart were found ossified or petrified, while in a great number softening or degeneration of the muscles of the heart had set in, either of these having the same tendency to weaken its action.

Treatment.—A restorative to rouse the action of the heart, and an external stimulant to relieve pain, are the applications that are indicated. For this purpose five grains of carbonate of ammonia dissolved in a cup of warm water, or thirty drops of sal volatile in the same vehicle, together with a mustard plaster over the region of the heart, are always serviceable.

In all the patients I treated, breast pang was associated with dyspepsia, requiring great attention to food and drink, and also to the state of the bowels and the skin, and was benefited by frequent baths and warm clothing.

Patients subject to breast pang should be careful to avoid severe muscular efforts, and strong mental excitement.

It is recorded that John Hunter, the great anatomist, while in a fit of passion, was seized by angina pectoris, which proved fatal.

DROPSY.

THIS disease is of two kinds, that called anasarca, in which fluid is poured out into the cellular substance between the skin and the muscles; and that called ascites, when fluid accumulates in the peritoneum, known as the cavity of the abdomen. But an ancient philosopher asserted that nature abhors a vacuum; and as far as serous membranes are concerned his theory is correct, for these membranes lie in close apposition, being separated only by the moisture that lubricates their surfaces.

These two forms of dropsy may both exist together, and constitute what is termed general dropsy.

We have observed already that serous membranes, such as the peritoneum, the pleura, and the pericardium, when inflamed, secrete large quantities of fluid, which are termed effusions into these membranes, and sometimes dropsy. But the accumulations of fluid which constitute the dropsies we now treat of, are not the result of any special inflammation of the membranes themselves, but are caused by some impediment to the return of the venous blood to the heart, so that the fluid portion of the blood exudes through the coats of the small vessels and collects in the cellular substance under the skin or in the peritoneum.

Disease of the liver, in a majority of cases, forms this obstruction. In the article on the liver we noticed that it is divided into two lobes, and that the large vena porta that carries the venous blood from the bowels and lower extremities, when passing up between the lobes of the liver, to the right auricle of the heart, is subject to be compressed by the liver, when it is either enlarged or indurated. This compression is reflected back, and acts upon the venous circulation in the bowels, and also the lower extremities; and the free course of the blood being thus impeded, the serum or thinner portion escapes from the blood vessels, forming anasarca of the legs or dropsy of the abdomen.

Disease of the heart, by preventing the free circulation of the blood, may obstruct the venous blood in its passage, and cause similar exudation.

The pregnant womb, or any abdominal tumour, by pressing on and obstructing the veins may cause dropsy.

An enlarged spleen is often found associated with dropsy; but in such cases the liver, heart, or the kidneys have generally been found to be implicated.

When Bright's disease affects the kidneys they fail to secrete their proper quantity of urine, and by this means become the cause of dropsy.

And a sudden check to the perspiration, by exposure to wet or cold, may prevent the escape of fluid by the skin, and cause accumulation internally. Hence dropsy is much more common in Britain than it is in Australia, the latter having a warm climate, favourable to perspiration.

ANASARCA

of the limbs is easily recognized by the pit or hollow left by pressure made with one finger on the part that is swollen, as enlargements from other causes do not pit when pressed.

ASCITES,

or dropsy of the abdomen, is ascertained by placing the expanded left hand on one side of the abdomen, and then striking gently with the four fingers of the right hand on the opposite side of the abdomen, when the wave of fluid will be sensibly felt by the left hand in contact with the abdomen. Pregnancy or other enlargements of the abdomen do not give this wave of fluid.

In the female constitution there are two parts connected with the womb, the right and left ovaries, which frequently enlarge and simulate dropsy, and also pregnancy. These tumours, when touched, do not give the wave of a fluid, and require the experience of a medical practitioner to trace their origin, and decide respecting these abdominal tumours.

Treatment.—As the object is to get rid of the accumulated fluid, we should avail ourselves of the three great avenues for evacuating from the constitution what is unnecessary and effete—the skin, the kidneys, and the bowels.

Free perspiration should be excited from the skin; the kidneys should be acted on by diuretic medicines, and the bowels should be stimulated by active or even drastic purgatives.

When dropsy sets in suddenly from exposure to wet or cold, the patient should have a hot bath at 102° Fahr. for half an hour or longer; he should lie between blankets, and take twelve grains of Dover's powder, to cause perspiration, which should be kept up for twelve or twenty-four hours by drinking warm toast- or rice-water, with one grain of ipecacuan in each drink, every four hours.

He should also have half a grain of podophylline every night, followed next morning by an ounce of Epsom salts to act on the liver and bowels, while the kidneys should be stimulated by the cream of tartar (the tartrate of potash), a teaspoonful being taken in a tumbler of toast-water twice or thrice a day.

The food should be a little dry toast or stale bread and one cup of tea morning and evening, and for dinner a little rice boiled in water and eaten with milk. The less food is eaten the recovery will be the quicker, and no drink should be allowed except what is necessary as a vehicle for the cream of tartar.

When dropsy commences gradually and slowly, pointing to organic disease of the liver, heart, or kidneys, as the primary cause, the same remedies as for dropsy from exposure to cold are equally applicable at first, but in place of cream of tartar, the iodide of

potassium, three grains in a wineglassful of water, after food thrice a day, should be taken regularly, the half-grain of podophylline at night and the Epsom salts each day being also continued. And this treatment must be persevered with, until the effused fluid is absorbed, or becomes so oppressive that it must be removed by tapping or puncturing the abdomen.

Recoveries after tapping are not numerous, and therefore we should not be hasty in having recourse to it, as we can consider the operation only a palliative remedy to relieve present pain, and the dreadful feeling of oppression, and difficulty of breathing caused by a large quantity of fluid pressing on the stomach and bowels, impeding the action of the heart and lungs, and rendering life intolerable.

I have seen, however, some fortunate cases in which, after tapping, medicine produced a much better effect than it had done before, and finally effected a permanent cure. In other instances the operation had to be repeated, perhaps, above a score of times, on which occasions gallons of fluid were removed, until the constitution being literally wasted away, was at last obliged to succumb to the disease.

The pain of tapping for dropsy is trifling, and amply repaid by the immediate relief and comfort obtained by it. Nor is it a dangerous operation, but we cannot assert that any operation is perfectly exempt from unfavourable consequences, and we would not recommend its adoption except from necessity. But syncope or fainting, the effect that was formerly most dreaded from this operation, is easily prevented by a circular bandage, made of calico slit at one end, to allow the other to pass through it, and held by two assistants, who, by pulling the bandage gently, make gradual pressure on the abdomen as the fluid escapes.

This pressure by the bandage prevents the blood stagnating in the large abdominal veins, and thus depriving the heart of its usual supply of blood, which causes the syncope, when the pressure of the water is taken off the veins. But the bandage should not be pulled forcibly, or to such extent as to cause pain to the patient.

In the treatment of dropsy the action of the skin should be carefully attended to, and increased by frequent warm baths at night, and warm clothing during the day. And the thirst which accompanies this disease should be restrained by taking ten grains of nitre, or twenty of cream of tartar, in each drink, which should never be more than a wineglassful of water at one time.

THE HUMAN EYE.

THIS delicate organ is subject to many forms of disease, both internal and external.

STYE

is the most frequent of these. It is a small boil that forms on the edge of the eyelid, and has been called *hordeolum*, because it is about the size of a barleycorn.

Like other boils it denotes a deranged state of the blood, and is often annoying to children of a scrofulous tendency, and to those who have been injured by improper food or exposure to cold.

Treatment.—These boils should be encouraged to suppurate by fomenting them constantly with folded linen moistened with warm water, or by a light bread-and-water poultice, and as soon as matter forms, it should be allowed to escape by puncturing with a needle or lancet.

The child's health should be attended to, and its digestive organs improved, by giving it five to ten drops of the solution of the perchloride of iron in a wineglassful of water after breakfast and dinner, to be taken through a glass tube; or, if preferred, a teaspoonful of cod-liver oil after food twice a day, the bowels being regulated by one grain of aloes and five of Epsom salts, given in a little syrup at night, when required.

The child's food should be light and easily digested, and it should be warmly clothed, to prevent chills.

BLIGHT OF THE EYES.

This is the name commonly given to two forms of ophthalmia prevalent in Australia. The milder of these is termed the swelled blight, and affects the eyelids only. The other is called the sandy blight; and both are attributed to the action of flies, which communicate a poison, carried from the inflamed eyes of the lower animals.

THE SWELLED BLIGHT

is of the erysipelatous character, and the eyelids become so swollen that one or both eyes may be perfectly closed up for some days in succession, depriving the person entirely of sight; but the eye,

meanwhile, is not in any danger, as the conjunctiva is not affected.

Treatment.—A solution of the acetate of lead, known as sugar of lead, five grains to the ounce of water, applied by a rag as a lotion, abates the swelling, which subsides in a few days, leaving the eye uninjured.

THE SANDY BLIGHT.

This affects the conjunctiva that covers the eyeball, which becomes in some instances very much inflamed, and if neglected terminates in purulent ophthalmia, followed by unhealthy granulations, or tumours, on the under surface of the eyelids, that are very troublesome. It seems nearly allied to Egyptian ophthalmia.

Treatment.—If attended to early, as soon as the eye begins to be inflamed or to weep, the solution of the sulphate of zinc, five grains to the ounce of water, dropped into the eyes night and morning, is sufficient to check the inflammation, provided the eyes are protected from further injury from the flies, and also from exposure to the light.

But if the attack has been neglected until matter has formed, and suppuration of the conjunctiva or lining membrane of the ball and eyelids has commenced, then the sulphate of zinc will not serve ; and the nitrate of silver (caustic), five grains to the ounce of rain or distilled water, should be dropped into the eyes night and morning until the inflammation disappears, taking care that the eyes are protected from light and further injury.

The nitrate of silver is the best, and a safe application for inflammation of the eyes after suppuration sets in ; but if it cannot be had, ten grains of alum dissolved in an ounce of water may be substituted for the caustic. Either is easily applied by a camel's-hair pencil or feather, or by dropping it into the eyes. If two drops get fairly in they are sufficient ; but a greater number do no injury, as they are soon expelled.

The excrescences which form on the inner surface of the upper eyelid, in chronic cases, are exceedingly troublesome. They should be excised by a small pair of curved scissors, and then touched with caustic or bluestone, to prevent their return. While present they act as so many notes in the eye, keeping up constant pain and inflammation.

OPHTHALMIA FROM COLD.

This is inflammation of the conjunctiva, or lining membrane of the ball and eyelids. The eye weeps, and feels as if motes had got into it ; but, when examined, the inner surface is red and inflamed. It is similar to sandy blight, and requires the same treatment.

INFLAMED EYELIDS.

Children of a scrofulous tendency are very often annoyed with "weak eyes," caused by an irritable state of the edges of the eyelids, which are red and inflamed, and apt to adhere in the morning, their edges being agglutinated by the matter that is thrown out during the night.

Treatment.—The best local application for this affection is what was formerly called the "Golden Ointment," and sold at a guinea an ounce. It is made by ten grains of the red oxide of mercury and an ounce of fresh lard, accurately rubbed together. And of this the size of a pea should be rubbed on the edges of the eyelids, when shut, every evening until the inflammation subsides.

The child should be protected from chills, its food should be light and easily digested, and its bowels regulated. The state of the blood should be improved by five drops of the solution of the perchloride of iron, given in a wineglassful of sweet milk after breakfast and dinner daily, or by a teaspoonful of cod-liver oil, increased gradually to a dessertspoonful, given also after food twice a day.

CONSTITUTIONAL OPHTHALMIA.

This occurs to children of a similar constitution to those who get inflamed eyelids ; but the part affected is different. The conjunctiva, or membrane that lines the eyeball and lids, becomes inflamed, with little discharge from the eyes, but great intolerance of light, so that the child can scarcely bear the eyes to be examined, and cannot tolerate a strong light. When this disease is neglected it assumes a chronic form, the conjunctiva covering the pupil becomes opaque, or a "speck" forms, and vision is destroyed.

Treatment.—The first thing to be done for such patients is to apply a light green shade to protect the eyes from the light. Medicine put into the eye does little service until the inflammation is checked, unless the pupil be opaque, and if so a solution of nitrate

of silver should be dropped into the eye once a day, till the "speck" is removed. Three grains of the caustic to an ounce of rain or distilled water is generally enough for children ; but five grains in some cases prove more efficient, and when persevered with seldom fail to remove the speck.

Constitutional means are most to be depended on for the cure of this form of ophthalmia. Iron, or cod-liver oil, as advised above for inflamed eyelids, or both these remedies given at the same time, the iron being given in the cod-liver oil, should be continued until their eyes are improved.

The diet of such children should be carefully attended to. Gross feeding is highly injurious to them. Pastry, cheese, salted meats, and made dishes are pernicious to them ; and ale, porter, and wine are equally so. They should be restricted also to regular meals, without pieces ; and have much exercise in the open air, when the weather is favourable.

A shower bath night and morning, tepid in winter and cold in summer, is peculiarly serviceable to them, as is also sea-bathing in the season.

In some tedious and severe cases, I have seen great benefit derived from shaving the head, and a repetition of blistering fluid applied over the crown of the head, so as to keep up a constant discharge, for some weeks in succession, while other remedies were continued.

RHEUMATIC OPHTHALMIA.

This form of attack is doubly dangerous, for, in addition to the conjunctiva, it affects also the sclerotic coat covering the ball of the eye, and likewise the iris, that circle of elastic tissue which surrounds the pupil, having the power of contracting and dilating, to receive a greater or less quantity of the rays of light, as at noon and in twilight.

The iris, when inflamed as in rheumatic ophthalmia, may contract so as to be perfectly shut against the rays of light ; and in this state it may adhere, or grow to the sclerotic coat, so as to block up and obliterate the pupil.

Although this may occur, the internal eye may be perfectly sound, as is proved by the formation afterwards of an artificial pupil, a portion of the adhering iris being cut out to admit the rays of light.

This operation is one of the triumphs of art over disease, and has

conferred a boon on many sufferers. Still the artificial pupil comes far short of the natural one, both in beauty and utility, and we should endeavour to avoid its necessity.

Rheumatic ophthalmia attacks principally the sclerotic coat, beneath the conjunctiva or mucous membrane, and known as the ball or white of the eye. The appearance of the blood-vessels on this membrane, when it is inflamed, is very marked, and quite characteristic of the disease.

The blood-vessels are seen to run in straight lines from the circumference or back part towards the centre or pupil, where they disappear and pass into the iris underneath. And this is the great distinction between rheumatic ophthalmia and conjunctivitis.

In conjunctival ophthalmia the blood-vessels intermingle, and form a network; while in rheumatic ophthalmia they are separate, in the form of a crescent.

The conjunctiva, or mucous membrane, always sympathises to some extent, and the more it is inflamed the difficulty in discriminating the real character of the disease is increased.

There is, however, another distinctive mark—the pain of conjunctivitis is in the eye; while that of rheumatic ophthalmia is principally above, below, and around the orbit.

As the disease advances, the appearance of the iris aids and confirms our diagnosis. The pigment on this elastic tissue, which gives the peculiar colour of eye to each individual, becomes altered when this membrane is inflamed. A gray or blue eye becomes yellowish or green, and a dark eye is altered to a hue between brown and red; while the aqueous humours behind the pupil seem muddy.

These symptoms being present, we have perfect evidence that the iris is inflamed and that the organ of vision is in imminent danger; because the pupil may be obliterated, or the inflammation may extend internally and destroy the entire eye.

The amount of pain in any case is an uncertain guide and deceitful criterion, as it is seldom proportioned to the injury that may be done.

The affected eye is always more or less intolerant of light, and painful when moved; but when shaded and still, there may be little pain, although we have positive evidence of lymph being thrown out and active inflammation existing.

Some patients are almost free from pain during the day, but suffer from severe paroxysms during the night, while others have pain with few, if any, intervals.

Treatment.—Mercury was formerly the favourite remedy for this disease, but as it is calculated to injure the constitution and render it more susceptible of cold afterwards, we cannot recommend it.

If the patient has formerly suffered from rheumatic fever or rheumatism of the joints, colchicum is certain to be serviceable, and ten minims of the wine of colchicum, with five minims of laudanum, should be taken in a little sugar and water every six or eight hours, as the stomach will bear it, and twenty grains of nitre in a teacupful of toast-water should be taken in the intervals, every six or eight hours.

Colchicum generally acts on the bowels, but if it does not, half an ounce of Epsom salts should be given every morning, as this medicine does not act favourably unless the bowels are open.

If the stomach will not bear colchicum, then oil of turpentine should be substituted for it, and thirty drops given in a wineglassful of sweet milk every eight hours, after food, to be increased gradually to sixty drops, as often, each day, till the iris returns to its natural colour.

To prevent the iris contracting and the pupil being obliterated one of three remedies should be employed—belladonna, hyoscyamine, or atropine. The extract of belladonna, softened with a little water, is the most familiar. Of this a coating should be applied in the form of a circle around the eye, on the upper lid and eyebrow and below the eye, and allowed to remain on until the pupil is dilated so that it does not contract immediately when it is exposed to light.

When dilatation has been produced to this extent, the belladonna should be washed off and discontinued for a day or two, to be renewed afterwards if required, because when the iris has been kept too long dilated it has adhered to the sclerotic coat, and lost the power of contracting, so that when the disease was cured, the iris remained dilated and the eye intolerant of light in future.

As soon as the inflammation of the iris is subdued by the colchicum and the nitre, or by the oil of turpentine, if preferred, the patient should take two grains of the iodide of potassium in a wineglassful of water thrice a day, after food, for two weeks, to prevent a relapse or return of the rheumatism.

The food should be farinaceous and the drink toast- or rice-water, stimulants of every kind being avoided, and the patient should live moderately and avoid exposure to cold until the constitution has been invigorated by the use of the shower bath at first and sea-bathing afterwards.

It is certain that mercury has a peculiar power over inflammation of the iris; but to serve, it requires to be pushed so as to affect the gums, or salivate slightly. And if the inflammation did not yield to the colchicum and nitre, or to the oil of turpentine, then one grain of calomel should be given in a little sugar every eight hours, till the gums become tender; when it should be discontinued, and two grains of the iodide of potassium, given in a wineglassful of water, after food, thrice a day, to carry the mercury out of the system, and prevent a return of rheumatism.

PURULENT OR EGYPTIAN OPHTHALMIA.

This form of inflammation of the eye is a disease so rapidly destructive, that it requires the judgment and experience of a medical practitioner to treat it successfully. In twenty-four hours the sight may be lost.

Treatment.—The violence of the inflammation must be met by proportionate strength of our applications, and twenty grains of nitrate of silver (caustic) to the ounce of rain or distilled water, is weak enough. This should be put into the eye, night and morning, taking care to remove with a small piece of sponge as much of the discharge from the eye as possible, before the medicine is applied.

The patient should get half a grain of podophylline, with one grain of aloes, in a little syrup, each night; or, if preferred, five grains of calomel; either of these to be followed by half an ounce of Epsom salts next morning, to be continued till the inflammation abates.

The food should be entirely farinaceous, and the drink toast- or rice-water; all stimulants to be avoided.

Persons attending such patients should recollect that any portion of the purulent discharge coming into contact with a sound eye is highly infectious; and sponge, towel, or other article used by such patients must be guarded against.

Purulent discharge of another kind, resulting from immoral conduct, if communicated to the eye, seldom fails to destroy vision, and should be equally avoided.

CATARACT OF THE EYE.

This disease is the result of inflammation attacking the crystalline lens, seated behind the pupil of the eye, for the purpose of refracting

the rays of light. The transparent membrane which covers the lens, when inflamed becomes opaque, so that the rays of light cannot pass through it; and vision is gradually lessened until it is finally destroyed or obstructed.

Patients suffering from cataract, when they look at a candle burning, see the flame surrounded by a halo, or luminous circle; and they also see objects best in twilight, because the pupil is then more dilated, and the rays of light enter at the edges of the lens, where the opacity is thinnest.

The disease is easily recognised by looking into the eye, and observing the white or flaky appearance of the crystalline lens behind the pupil.

To cure this disease, the lens must be removed out of the axis of vision, and this operation can be performed in three different ways.

By extraction, making an incision in the pupil, and removing the lens out of the eye.

Secondly, by couching, introducing a curved needle through the white of the eye behind the pupil, and pressing the lens down below the pupil.

Thirdly, by breaking up, introducing an instrument through the pupil, tearing the opaque covering of the lens, and thus exposing the lens to the action of the aqueous humours of the eye, by which it becomes dissolved or absorbed.

The first operation, or extraction, if fortunate, and not followed by inflammation, gives a perfect cure; but it is more hazardous than the others.

The second operation, or couching, is much safer, and is easily performed; but it is not always perfect, because the lens, having been depressed, may rise again, and obstruct vision.

The third, or breaking up, is tardy in its results, for time is required to dissolve the lens, after the capsule is torn, and therefore I never adopted it; but many modern operators prefer it.

AMAUROSIS OF THE EYE.

This form of blindness is caused by insensibility of the retina, or the expansion of nerve, seated at the posterior part of the eye.

It may proceed from disease of the brain, effusion of blood, a tumour pressing on the nerve of the eye, or from over-exertion of the eye, as in those who work or read too much by lamp-light. It has

also occurred to inexperienced persons looking at an eclipse of the sun; and it is generally considered that it may be produced by persons sleeping with the eyes exposed to the light of the moon.

An old man of seventy years, on whom I operated for cataract of both eyes, in Sydney, after he recovered got drunk, and slept in the open air under the full moon, which is particularly bright in Australia; and when he awoke next morning he was quite blind. Being ashamed of his conduct, he did not acquaint me for some two or three weeks afterwards; and means to restore vision had no good effect.

The state of the stomach has great influence on the eye-sight, and persons suffering from indigestion often see imperfectly, and have spectres floating before their eyes. The state of the nervous system also affects the sight, and hysterical females frequently experience temporary fits of amaurosis, which, though alarming, soon, by the aid of tonics and bracing exercise, disappear.

When the disease commences it is accompanied with headache, pain at the back of the eye, and dimness of vision; with occasional electric sparks shooting through the eye. When the patient looks at a lamp or candle, the appearance of it is greatly altered, and the flame seems diffused and irregular.

Amaurosis is easily distinguished from cataract. In the latter the pupil appears white or discoloured, while in amaurosis the eye looks clear and healthy, unless the vitreous humours in front of the retina be diseased.

Treatment.—Everything tending to increase determination of blood to the head should be avoided. Rich food and alcoholic drinks of every kind are pernicious to such patients, and stooping is also injurious. The food should be light and easily digested, and the bowels should be acted on by half a grain of podophylline and five grains of Epsom salts, taken in a little syrup, every second night, or every night, for a week, if not severe; and then twice a week afterwards.

The head should be kept cool, and if the complexion is florid, two leeches should be applied behind the ear, twice a week, till the eye-sight is improved.

Persons threatened with amaurosis should immediately consult a medical practitioner, as it is a disease that may arise from such different causes, that no special treatment can be suitable for every case.

SPECTRE VISION.

A black spot, or the appearance of flies before the eye, often alarms persons in perfect health, and whose eyes are quite sound. When this occurs to persons in health, it indicates repletion of the system and a deranged state of the stomach, requiring abstinence from stimulants and a change of food.

In fever it is an unfavourable symptom, and denotes determination of blood to the head and brain, which should be promptly attended to, and counteracted by shaving the head, and applying ice or cold lotions to it.

THE EAR.

THIS is a complicated organ, whose office is to make us sensible of sounds, which are rendered audible by the undulations of the air affecting the drum of the ear.

The delicate membrane called the drum of the ear is placed at the bottom of the external opening or passage leading to the internal ear ; there being also an air passage to the drum from the throat, just behind the tonsils.

The object of this air passage from the throat seems to be to keep the drum sufficiently tense, by means of the pressure of the air from within, so that the undulations of the air from without, impinging on the drum, may give the necessary information or intelligence to the nerve of the ear.

The importance of this internal air passage is known by the fact that hearing becomes very imperfect when this aperture or duct is obliterated, by severe quinsy, or inflammation of the throat. We are also informed of its use by noticing that many persons open the mouth by instinct when they are very anxious to catch sounds that are indistinct or at a distance.

But the strongest evidence that the drum of the ear is made tense by the pressure of air from the throat is derived from the occurrence of rupture of the drum of the ear by fits of spasmodic cough during hooping cough.

The internal ear consists of a labyrinth occupied by seven small, delicate bones, that no doubt perform an important part in the act of hearing, but, like that of the nervous system, their mode of action is too subtle to be cognizable by our means of observation.

The drum of the ear is coated and protected by a sebaceous sub-

stance, secreted by the wax glands, and called earwax, and the most common disease of the ears is caused by an accumulation of this wax becoming indurated by slight inflammation from cold, and thus obstructing the air passage.

INDURATED WAX IN THE EAR.

Any person suffering from this hears unusual sounds, as of the sea roaring, or gas escaping by a small orifice, and, by looking into the ear, with the aid of a reflector, the obstruction of dark-coloured wax is seen at the bottom of the ear.

Treatment.—Indurated wax is easily removed by syringing the ear with a four-ounce syringe, which every family should have.

When syringing the ear, the point of the syringe should not be inserted into the passage, so as to block it up and prevent the water from flowing out, for by doing so the drum of the ear might be ruptured. But by holding the syringe a short distance—about half an inch—from the ear, it can be syringed any number of times with perfect safety: and to remove indurated wax requires repeated applications of the syringe.

If the wax be very hard, it can be softened by dropping a little brandy or other spirit into the ear, and stopping the passage with wool or cotton, to retain the moisture: but syringing with warm water and soap is generally sufficient.

After the wax is removed the ear is more than usually susceptible of cold, and should not be exposed to it for a few days.

INSECTS

occasionally get into the ear, and should be removed by dropping into the ear a saturated solution of salt and water, and then syringing them out with warm water.

ABSCESS IN THE EAR.

Exposure to cold often causes inflammation, and the formation of an abscess in the external ear, which, although very painful, seldom inflicts any permanent injury, as this does not affect the drum.

Treatment.—Fomenting constantly with warm water to soothe, and prevent, if possible, the formation of matter, is the most promising plan; but if this fails, a light bread-and-water poultice should

be applied to hasten suppuration, which is the more usual termination.

But deep-seated inflammation of the ear, such as occurs in measles and scarlatina, generally destroys the drum of the ear, and, consequently, the hearing. Artificial drums, it is true, are now provided for such cases, but they require great dexterity in applying them, and they are not always useful.

DISEASE OF THE BONES OF THE EAR.

Children who inherit a scrofulous tendency of the constitution are subject to get disease of the bones of the ear. This disease is known by the discharge of thin fetid matter from the external ear, as the effluvium from decomposed bone is always particularly offensive. Such discharge may continue at intervals for some years, until the seven small bones of the ear are decomposed and removed, when loss of hearing follows, as a consequence of the want of these bones.

Treatment.—To syringe the ear frequently with tepid water in such cases is necessary, as an act of cleanliness, and may also be serviceable, by preventing the absorption of matter, which, being carried to the brain, has in some instances produced inflammation, and formation of pus inside the skull, that proved fatal.

POLYPUS OF THE EAR.

A small, fleshy tumour forms occasionally in the ear, and becomes injurious, by obstructing the removal of the earwax, and impeding the hearing,

Treatment.—If the root be small, as generally is the case, it may be cut off by a pair of scissors ; but if not, a thread of silk should be tied around the root, and pulled a little tighter every day, till the tumour drops off.

POLYPUS OF THE NOSE.

TUMOURS in this locality are always seated too high up to be easily seen or removed. They are occasionally soft, consisting of mucous tissue ; but they may be firm and muscular, or even cartilaginous.

Treatment.—They are easily removed by a pair of suitable forceps,

seizing the tumour and twisting it at the base, until it is removed by gradual extraction. Hæmorrhage in such cases is not much to be dreaded, as blood-vessels that are torn or pulled asunder seldom bleed much.

EPISTAXIS, OR BLEEDING FROM THE NOSE.

Hæmorrhage from the nose is often troublesome, and sometimes dangerous, being increased to an alarming extent by persons holding the head down, and thus causing a greater determination of blood to the part. In many instances I have found patients lying in bed, with their heads hanging over a basin seated on the floor, literally wasting their life's blood.

Treatment.—Persons taken with bleeding from the nose should stand erect, have a towel wet with cold water tied around their heads, and a piece of ice or cold steel applied to the nape of their necks. The object in making them stand erect is twofold, it lessens the flow of blood to the head, and it causes faintness, which makes the bleeding cease.

Should these means not be sufficient to stop the loss of blood, the nostrils should be plugged with a pledget of soft calico or surgeon's lint, about an inch long, and thick enough to fill the nostril. This pledget, before it is introduced, should be soaked in a saturated solution of alum; and if the case be severe, and the loss of blood considerable, it may be necessary to allow the plugs to remain in the nostrils for three days, to prevent a relapse.

Persons who are prone to hæmorrhage from the nose should live abstemiously, avoiding all alcoholic drinks, also rich food, and suppers. They should also eschew violent exercise, and be careful to keep the head cool and the feet warm.

THE BRAIN.

THIS mass of nervous matter is the great centre of the nervous system, the seat of the reasoning powers, and the director of all our actions; and hence the importance of having a sound brain in a sound body.

Like other parts of the human frame it is subject to a variety of diseases. It is largely supplied with blood-vessels, and covered with three membranes: the dura mater, next the skull; the pia mater,

next the brain ; and the arachnoid, placed between these. The latter is a serous membrane, similar in texture to those covering the heart, the lungs, and the bowels.

We noticed formerly that the office of such membranes is to secrete a little fluid to lubricate their own surfaces ; and that when they are inflamed, this secretion is often augmented, so as to constitute effusion or dropsy in these cavities. Nor is the brain exempt from this general rule ; on the contrary, we know that dropsy of the brain is occasionally congenital, and has in some instances been so extensive as to impede the birth of the infant, and make it still-born.

Water on the brain is also generally admitted to be one of our hereditary diseases, being always associated with tubercles, or the scrofulous diathesis.

It is generally a disease of infancy ; but like other constitutional tendencies it may lie latent for many years ; appearing sometimes at puberty ; the meridian of life ; or in advanced old age, as in the case of Dean Swift, who was carried off by it at the age of seventy-eight, after ten years of suffering and imbecility.

The exciting causes of this disease in childhood are gross, improper feeding, falls on the head, and the irritation of teething. In more advanced life it may be called into action by the stoppage of any natural or artificial discharge ; by too much exercise of the brain, in anxiety or study ; and by the abuse of alcoholic stimulants.

Infants when first attacked with inflammation of the brain, the precursor of effusion and its consequences, lose their appetite ; become fretful and irritable ; the bowels are irregular, either confined or relaxed ; the evacuations are unnatural, either pale without bile, or dark with too much bile ; or they are slimy and of sour, offensive odour ; while the sufferers look pale and depressed. They are also restless, and when they do sleep, they awake with a scream ; which is ominous of evil.

After the stomach and bowels have been affected for some time in this manner, the head symptoms become more marked. The face is flushed, the head hot, the pulse quick, and the child is seized with lancinating pains of head, recurring at short intervals, and followed by incessant sickness at stomach ; the evacuations from the bowels being still unnatural and diseased.

The infant's features, too, betoken the internal suffering. The eyes are dull and sunken, the brows are contracted, the hands clenched, or the thumbs turned into the palms of the hands, indicating intense

pain, and approaching convulsions; which sometimes prove suddenly fatal.

As the inflammation of the brain advances, the child seems disposed to lay its head down, and keeps rolling it constantly about from side to side; uttering pitiable moans, or else screaming in a violent manner.

Finally the child becomes insensible; the pupils are dilated; the muscles are relaxed; and the body is covered with a cold clammy perspiration, generally the harbinger of death. Yet after days and nights of suffering, equal to all that has been portrayed, I have seen infants rally and recover.

It is also certain that a temporary respite from suffering, and a promise of recovery, supervenes in many cases; but the deceptive lull for a day or two is generally followed by convulsions, which terminate our hopes and the child's sufferings.

All cases of water on the brain do not, however, commence with the marked symptoms above enumerated. In some instances the disease sets in insidiously. The child seldom complains of pain; its appetite is tolerably good; and the other indications of health are moderate; but the infant seems imperfectly nourished. Its head seems too large for the weak muscles of the neck to support, and it walks with a tottering gait.

Some such children are dull and inactive, fond of reclining in solitude; others, on the contrary, are fond of sport, and remarkably lively, showing a precocity of intellect which requires to be restrained; as such brains should not be excited, or allowed to work too soon.

In these chronic and concealed forms of this disease, the most striking symptom is the disproportion between the size of the head and that of the body, and the unclosed state of the fontanelle or open of the head, which does not become ossified in due time; or if the sutures have closed, they are separated again by pressure from the increase of the fluid within.

But the most intractable form of this disease, or scrofulous affection of the brain, is that in which the constitutional tendency remains latent till the years of puberty, or perhaps later in life, when the patient, apparently in perfect health, is seized, without any immediate exciting cause, with excruciating pain of head, and sickness of stomach; which are soon followed by convulsions, coma, and death.

Treatment.—Proper means in the first form of this disease, when

it is of the inflammatory type, can do much to avert its evil consequences. If the child is suffering from painful dentition, the gums should be examined, and if necessary they should be scarified. But we must not forget, that infants often suffer from the effects of teething, while the tooth is passing through the bony socket, and before scarifying is applicable as a means of relief.

Meanwhile the head should be kept cool by sponging it frequently with water, tepid in winter and cold in summer, the body and lower extremities being warmly clothed and protected from chills.

To support the infant's strength by suitable nourishment is the great object. If the child has a breast it is the best means of nourishing it; but care must be taken not to allow it to have too much at once, as any large quantity will keep up the vomiting and prevent recovery.

If the child be weaned and below two years, it should be fed from the bottle, with cow's milk and one-third, or if very young, one-half of water, and a little lump sugar; given in small quantities at a time as the stomach will bear it, a tablespoonful, and sometimes only a dessertspoonful. If milk disagrees with the child, as occurs in some instances, it should be fed on farinaceous substances, as ground rice, arrowroot, sago, and maizena, boiled in water and seasoned with salt; made thin enough to be taken from the bottle and tube, and given in such quantities only as the stomach can bear.

Anything approaching to solid food should not be allowed, because while nausea prevails, the power of digesting is in abeyance. And to give wine and such stimulants to infants having irritability of stomach and inflammation of the brain, is very reprehensible.

If the child's bowels are relaxed, lime water should be substituted for plain water in its milk; and if this is not sufficient, or if it is getting farinaceous food, let a mixture be made with one drachm of precipitated chalk, one drachm of tincture of catechu, and one and a half ounce of water, of which the child should get a teaspoonful every eight hours, till lax abates, and then less frequently, as it may be required. This mixture having no syrup in it will keep any time, and each dose can be made palatable with sugar.

If the infant's bowels are confined, it should get half a grain of aloes with five grains of Epsom salts, in a little treacle or syrup, every morning, until the bowels act naturally. Calomel was formerly ordered for this purpose, but most practitioners now consider it unnecessary and injurious. Rhubarb is often given to children, but

while it opens the bowels, it also causes a tendency to constipation afterwards, to which objection aloes is not liable.

In the chronic form of hydrocephalus, or water on the brain, when the head is much enlarged, the use of squill as a diuretic, together with an active purgative, calculated to unload the liver, are the means most worthy of confidence. Five grains of powdered squill should be given in a little syrup, after food, thrice a day ; and one-sixth grain of podophylline with five grains of Epsom salts, also in a little syrup, every morning, unless it is too severe, and if so, every second morning.

The child's food should be milk and water or farinaceous, as directed above ; the head should be shaved, and the expanding skull supported by strapping it with adhesive plaster, which ought to be renewed once a week, to allow an opportunity of not only keeping up the pressure, but also increasing it gradually.

Perseverance in this plan has often succeeded in cases very unpromising. The diuretic and active purgatives are powerful remedies, and generally succeed. When they fail, some advise tapping the brain, and removing the fluid by this means.

Of this operation I have no experience, but successful cases have been reported, and as a *dernier* resource it seems, at least, admissible, being recommended by the fact that a child was cured by accidentally falling on a nail, which, by penetrating the brain, allowed the water to escape.

When the disease assumes the latent and protracted form, and then attacks suddenly, at an advanced period of life, it is too apt to be mistaken for a bilious attack, and to be allowed to destroy life unopposed. There are, however, marks of distinction to enable us to discriminate.

In a bilious attack the stomach has been overloaded with what it could not digest ; the tongue is coated, the breath tainted, and sickness at stomach, or nausea, precedes the headache.

In inflammation of the brain, caused by the scrofulous diathesis, the tongue is clean, the breath good, and the sickness at stomach follows the headache, which is always of the lancinating kind ; comes on suddenly, and is soon followed by effusion of blood on the brain, convulsions, insensibility, and death.

To avert this catastrophe, and arrest the progress of the disease, the patient should be placed in a sitting position ; cold should be applied to the head by ice in a bladder or bag of oiled silk, or by dropping cold water on the head ; a mustard plaster should be

applied to each leg, a warming pan of hot water to the feet ; leeches should be applied to the temples, unless the face is pale, and care should be taken that no part of the dress be tight about the neck or waist.

If nausea prevails, the bowels should be relieved by an enema of soap and water ; but if the stomach will bear it, half an ounce of Epsom salts will act more favourably.

The patient should be kept perfectly quiet, and not allowed to talk. A wineglassful of toast- or rice-water should be the only drink, and no food should be taken for the first twenty-four hours, and then only a little ground rice or arrowroot boiled in water, and eaten with a little milk. Tea, coffee, and every excitant must be forbidden.

If the face becomes flushed during the first day or afterwards, the leeches should be re-applied to the temples, two or four on each side, according to the strength of the patient ; and the head must be kept constantly cool for some days, till convalescence is fully established.

A relapse in such cases is always to be dreaded, and guarded against by quietness, mild food, attention to the bowels, avoiding to stoop, or do anything to cause determination of blood to the head.

To hasten the absorption of blood that may have been thrown out on the brain, the patient should take two grains of the iodide of potassium in a wineglassful of water, after breakfast and dinner, and continue to eat sparingly for some time. Exercise at first should be by carriage, and moderate.

APOPLEXY.

Although this disease is similar in some of its consequences to the last mentioned, yet it is exceedingly different in its manner of attack, and the kind of patients subject to it.

Persons of full habit, who make blood too fast, who are distinguished by having large, stout bodies, small heads, and thick short necks, are those most prone to suffer from apoplexy. It differs from the former affection, also, by attacking persons in advanced life—seldom before fifty years, and generally from sixty upwards.

It is certain that apoplexy may, however, occur in constitutions the opposite of plethoric, by the effusion on the brain of serum, or the thinner part of the blood, owing to some obstruction to the return of the venous blood from the head.

In apoplexy the patient falls suddenly, is quite insensible, the

pulse is slow and full, the face is flushed, and the breathing is stertorous.

The appearances are very similar to those of a person fully intoxicated with ardent spirits, and can be discriminated only by the breath of the person, and the previous history of the case.

The state of insensibility, called coma, may continue for some time, with or without convulsions, and yet recovery may take place without leaving any trace of the attack. A second attack may also have the same favourable issue, but there is a popular, and I believe just, dread of a third attack of apoplexy.

Some do not survive the first attack. Some recover from coma and insensibility, but with paralysis of one side, imperfection of speech, and generally with loss of memory.

The paralysis is sometimes transient, and goes off in a short time; but too often it remains permanent for life. And when recovery from paralysis occurs, it is noticed that power returns to the leg oftener than to the arm.

Persons naturally predisposed to apoplexy should live abstemiously, avoiding rich food, pastry, and made dishes, also alcoholic stimulants, especially ale and porter; and if subject to vertigo or giddiness after stooping, or occasional attacks of blindness or deafness, they may consider these as premonitory symptoms, and so many additional reasons for abstemiousness, both in eating and drinking.

Treatment.—When a person is seized with apoplexy, the head should be raised to a sitting or half-recumbent position; all ligatures about the neck and person should be removed; the head should be kept cool, by dropping cold water slowly on it, or by ice; and the extremities should be kept warm by a footpan of hot water, or bags of heated salt; and care should be taken that the patient's head does not fall too much to either side, so as to obstruct the return of the blood from the head by the jugular veins.

In attacks of apoplexy it was formerly the practice to bleed largely; and if the pulse be full and hard, and the face flushed, to take blood from the arm is highly advisable; but the indiscriminate use of the lancet has led to many errors, because so much blood may be already effused on the brain, that the patient may be in a state of syncope or faintness; and this having been increased by bleeding from the arm, has, in some instances, proved fatal.

If, therefore, the face be pale, the pulse weak and intermitting, and a cold perspiration on the surface, to take blood from the arm

is only calculated to extinguish the flickering vital flame, and to hasten the issue we ought to avert. On the contrary, a mustard plaster should be placed over the stomach, the extremities should be kept warm, and if the patient can swallow, he should have thirty drops of aromatic spirit of ammonia, sal volatile, or twelve drops of fluid ammonia, in a wineglassful of warm water every hour, till he rallies.

But although loss of blood may not have been necessary, but, on the contrary, calculated to do injury in the first instance, inflammatory symptoms may set in afterwards, the face may become flushed, the pulse full and bounding, and the skin hot and dry, indicating not only the propriety, but the necessity for bleeding, either by leeches to the temples, or by the lancet.

After an attack of apoplexy, an aperient to act on the bowels and liver is always necessary, and half a grain of podophylline, one grain of aloes, and ten of Epsom salts should be given in a little syrup, every eight hours, till the bowels act, and afterwards every night or second night, as required.

To promote recovery, the food and drink must be strictly attended to. Alcoholic drinks of every kind must be abstained from, and their place supplied by a wineglassful of infusion of chiretta or quassia after breakfast and dinner; and the diet must be chiefly farinaceous, or at most a little light animal food for dinner.

As those suffering from apoplexy and paralysis have generally been persons who have lived fully and freely, some imagine that their former habits cannot be interfered with, and that they must have their wonted stimulants.

Many a victim, I am convinced, has been sacrificed on the altar of this theory, while the paralysis and sufferings of others have been prolonged for years by this false impression,—an opinion which is opposed to common sense, because these persons were ruined by these stimulants when in health and taking active exercise, and cannot now require them, when diseased and unable to take exercise.

All the good recoveries in my practice were patients who submitted to perfect abstemiousness, and avoided everything calculated to increase determination of blood to the head, while they took a wineglassful of infusion of chiretta or quassia after breakfast, and two grains of the iodide of potassium after dinner, in a wineglassful of water, and again in the evening. They also had a shower bath regularly, and spent as much time as possible in the open air, when the weather was favourable.

PARALYSIS.

This affection, as we have noticed, is the common result of effusion of blood in or upon the brain, from the rupture of a vessel in apoplexy; the fluid thrown out compressing the brain, and thus destroying its sensibility and power of acting.

But paralysis may also occur from softening of the brain, without any effusion of blood; or it may be caused by pressure on the brain, from fracture of the skull. In the latter case the only remedy is to trepan the skull, and elevate the depressed portion.

Paralysis affecting one side only of the body is called hemiplegia, and when it affects both of the upper or of the lower extremities, it is called paraplegia; and in hemiplegia it is the rule that the loss of power occurs on the opposite side to that of the effusion or compression, owing to the nervous fibres from the brain decussating or crossing each other. Consequently, if blood be effused on the right side of the brain, the left side of the body will be paralysed; and if on the left side of the brain, the right side loses power.

Paralysis may also be caused by compression of the spinal marrow, which has its blood-vessels and membranes as well as the brain, and gives sensibility and motion to the lower extremities, although the brain is still the ruling power.

Effusion of blood or lymph, termed APOPLEXY OF THE SPINE, often causes paralysis of one or both of the lower extremities.

In Australia it is a frequent result of acute rheumatism, affecting the membranes of the spinal marrow; and it occurs also from inflammation of these membranes, the result of sprains or injuries affecting the spine.

A pitiable instance of this kind occurred to me. A young man, who was the champion of his district, was challenged to wrestle with another, whom he had formerly beaten; and at the first onset he floored his antagonist, but was obliged to refuse him another trial, because he felt he had injured his spine by the effort he had made in wrestling. He walked home, however, a distance of two or three miles, and went to bed without telling his widowed mother.

Next morning, when attempting to rise, he found he had lost the power of one extremity; and his mother, fancying it was only stiffness from cold, rubbed the limb with turpentine, and expected it would be well next day; but the following morning the other extremity was equally powerless.

An unwillingness to have his state reported, and ignorance of its

importance, caused him to remain without medical advice for some weeks, until the period for successful treatment had passed over, and applications were ineffectual.

About six months after the injury he came into hospital, and I was struck with his appearance, as a splendid specimen of humanity. He looked as one in full health, and he had perfect power in his hands and arms, but from the waist down he was completely paralysed. He was very patient, and willingly submitted to every means likely to be serviceable; but, I am sorry to say, all applications were unavailing in his case.

Treatment.—Paralysis being the consequence of a previous disease, to treat it properly it is necessary to ascertain the cause, and the character of the previous malady.

If the loss of muscular power results from compression of the brain by blood thrown out in an attack of apoplexy, our remedies should be such as are calculated to cause the absorption and removal of the effused fluid. For this purpose, some medical practitioners bleed largely with the hope of exciting the action of the absorbents, by lessening the quantity of blood in the system.

This practice cannot be recommended, because it is not always safe; as we know that apoplexy often occurs from the effusion of serum, or the thinner portion of the blood, in constitutions which are always injured by the use of the lancet; and that any quantity of blood removed in this way is soon restored, and even exceeded, by fluid taken into the system, making the blood more watery than formerly, and consequently more liable to be effused again.

But in both kinds of effusion, either the sanguineous or the serous, cathartics to act on the bowels, and diuretics to stimulate the kidneys, afford us a safe and efficient means of depleting, and exciting the absorbents to act vigorously. Podophylline in half-grain doses, combined with a teaspoonful of Epsom salts in syrup given every night, and followed next morning if necessary by a dessertspoonful of Epsom salts, has an admirable effect. And the extract of elaterium in doses of one-sixth of a grain, with a teaspoonful of Epsom salts given every eight hours till it acts, seldom fails to unload the bowels and carry off a large quantity of fluid. These two given alternately have a decidedly good effect; but their action must be kept up for some time, twice or thrice a week.

Together with these, the patient should get two grains of the iodide of potassium in a wineglassful of water after food, thrice a day. And these medicines should be continued thus for three weeks, and then

given less frequently; the iodide twice daily, and the purgative twice a week.

In addition to these means, a blister applied to the nape of the neck, and either kept open by a stimulating ointment, or repeated often during the treatment, hastens the recovery. Some prefer setons or issues, but their effect is more tedious, and they are very annoying to a patient.

While endeavouring by these means to remove the effusion, equal care is necessary to prevent injury being done by improper food or drink. For such patients having been formerly accustomed to indulge their appetite, and being naturally fond of the luxuries of life, are little inclined to submit to the rule of constant self-denial; and hence the difficulty of treating them.

Still, abstemiousness must be insisted on. The food must be chiefly farinaceous and in moderate quantity, with a little light animal food once a day for dinner. Alcoholic drinks of every kind must be abandoned, and their place supplied with good water, or if preferred, a cup of cinnamon-, nutmeg-, or ginger-tea, made palatable with sugar.

In paralysis of the lower extremities from effusion into the sheath of the spinal marrow, the same remedies are applicable; but in this form of the disease issues are more serviceable; because we can apply them close to the spine, and near to the seat of the injury.

The speediest and best method of forming an issue, is to divide the skin through to the cellular substance, in a slanting direction, about three or four inches long, on each side of the spine; and stuff the incision with surgeon's lint or calico for three days, till matter forms; after which, it should be dressed every morning, by putting into the wound a little calico, moistened with a saturated solution of bluestone, kept in place by straps of adhesive plaster.

Electricity is a powerful remedy, and a valuable aid for restoring nervous energy, after the effusion has been removed by the above means. Some have reported unfavourably of its influence, owing, in my opinion, to their not having made the necessary preparation for its use; for when applied under suitable circumstances, it seldom fails to have a good effect.

Exercise in the open air is very important, and the patient should drive out as soon as he is sufficiently convalescent, and if he can walk, even imperfectly, he should be encouraged to do so, and to be as much out of doors as possible when the weather is favourable.

When taken with some special object in view, exercise always has

a doubly good effect, because the mind is employed as well as the body ; and as the mind in such cases is generally impaired, and the temper irritable, it is very desirable to have some suitable employment for paralytic patients. Anything requiring study or close attention is not commendable, and backgammon, cards, and other indoor amusements are injurious ; but to superintend the cultivation of a farm, and be amused by the hearty jests of the haymakers and reapers, are calculated to be highly beneficial. And exercise on horseback, when the patient is sufficiently recovered, with an interesting companion to direct his attention to the beauties of nature, and to keep the mind occupied and amused, is very salutary and conducive to improvement and recovery.

Persons who have had an attack of apoplexy should be careful to keep the head cool, and for this purpose the shower bath should be used morning and evening ; and if the person be subject to flushes or heat of head, he should have it sponged frequently with cold water.

Sea bathing is also very serviceable, as the change of society at watering ports affords amusement, and diverts the mind from brooding over one's privations and afflictions, which is always a most unprofitable occupation.

All these means must, however, fail, unless constant attention be paid to the stomach ; which organ has such immediate influence on the brain and nervous system, that any improper food or drink will counteract the good effects both of medicine and care.

Tea, for such persons, should be black only, moderate in strength and in quantity ; but coffee should be avoided, as being too heating and unsuitable. Porridge of barley or rye meal boiled in water, and eaten with milk, forms the best breakfast ; fowl, white fish, or the lean of beef or mutton, with a mealy potato, rice, or some light vegetable, as cauliflower, French bean, or vegetable marrow, is the most suitable for dinner, which should be early, not later than two o'clock ; and tea or cocoa, with stale bread, or toast buttered when cold, should be the last meal for the day, as suppers for such patients are always injurious.

All alcoholic stimulants, especially ale and porter, are pernicious to such patients ; and if indulged in, even in small quantities, increase the sufferings of the patient, and render recovery hopeless. The opinion that the influence of former habits renders their continuance necessary, is perfectly fallacious. On the contrary, the effect of these habits makes their use now to be quite intolerable.

PARALYSIS OF THE MUSCLES OF THE FACE.

This form of paralysis is generally more alarming than dangerous. It is caused by an affection of the seventh pair of nerves, and seldom proceeds from effusion on the brain.

It may arise from exposure to cold, from dyspepsia, or from debility. The face is often greatly distorted, the muscles being drawn to the side opposite to that of the affected nerve.

Treatment.—Tonics are the best remedies for this disease, and iron suits the greater number of such cases. One ounce of the carbonate of iron mixed in a pound of treacle, and a teaspoonful taken after breakfast and dinner, will generally succeed ; but ten minims of the solution of the perchloride of iron, taken through a glass tube in a wineglassful of water, equally often, is more palatable, and equally efficacious.

The diet should be very mild, and the bowels should be regulated by two grains of aloes and ten grains of Epsom salts, in syrup, at night, as required. After the stomach and the blood have been improved by the iron taken for a week, electricity will hasten the recovery.

PARALYSIS FROM THE POISON OF LEAD.

A peculiar kind of paralysis often attacks persons exposed to the poison of lead, as painters and others. It is characterised by the hand drooping by reason of weakness of the wrist joints, and by a slate-coloured line along the edge of the gums.

Treatment.—This affection soon yields to the action of three to five grains of the iodide of potassium, in a wineglassful of water, after food, thrice a day, the wrist being supported by a flat splint, and the person removed from the influence of the poison, and the bowels acted on.

PARALYSIS FROM MUSCULAR RHEUMATISM.

The muscles, particularly of the lower extremities, when affected with rheumatism, are occasionally paralysed, although the pain may be little complained of or annoying to the patient.

Treatment.—For rheumatism of the subacute character the iodide of potassium is generally the best medicine. Three or five grains, according to the strength of the patient, should be taken in a wineglassful of water, thrice a day, after food, which should be light and easily digested, stimulants being abstained from.

A hot bath at 102° Fahr. for a few nights, followed by a tepid shower bath in the mornings, for some time, hastens the recovery.

THE SHAKING PALSY.

Paralysis and palsy are synonymous, and this peculiar affection is the last we shall notice. It commences generally in the hands, then extends to the head, and may affect the entire body. It is generally an accompaniment of old age, and is too often intractable.

Treatment.—The iodide of potassium in two-grain doses, twice or thrice a day, in a wineglassful of water, after food, if aided by electricity, is the most promising means.

SOFTENING OF THE BRAIN.

This affection, which is called by the French *ramolissement*, is generally the result of inflammation, caused by the abuse of alcoholic stimulants, aided, perhaps, by anxiety of mind or too much study. But it may also be caused by the want of proper nourishment for the brain, owing to its artery being obstructed by compression, or blocked up by a clot of coagulable lymph.

The symptoms which indicate softening of the brain are fixed pain at the back of the head, giddiness on stooping, loss of memory, irritability of temper, a disposition to shed tears when excited, a tendency to drowsiness, depression of spirits, and impaired sight and hearing. Softening of the brain generally occurs to persons advanced in years, and the premonitory symptoms should always be attended to, because it is only in the early stage that any means can grapple with this malady.

Treatment.—Persons threatened with softening of the brain should cease to study or attend to business; they should abandon the use of alcoholic stimulants, and also tea and coffee. They should avoid narcotics of every class, and of these tobacco is a frequent cause of injury to the nervous system. They should have change of air and scene; they should avoid rich food, and adopt early hours, with moderate exercise daily in the open air.

If acute headache marks the case as the result of inflammation of the brain, a seton or issue at the nape of the neck is also advisable.

CONCUSSION OF THE BRAIN.

This affection may be caused by falls, by injuries to the head, or by shaking of the whole person, as in railway accidents.

If the shock be slight, the person may be stunned only for a few minutes, and then recover; but in severe cases the person may be perfectly unconscious, and remain so for hours; while in some instances death is immediate, without any attempt to rally.

Concussion of the brain may be mistaken for apoplexy, but we have distinctive symptoms sufficient to enable us to discriminate. In apoplexy the face is flushed, or nearly purple; and the breathing stertorous, or snoring; while in concussion of the brain the face is pale, and the breathing weak or suppressed, and less sonorous than natural, sometimes scarcely perceptible. The patient is literally in a swoon or faint; the pulse is weak, and the extremities are cold.

Treatment.—To bleed the patient for concussion of the brain, in the first stage, before the nervous system has been allowed to rally, is not only injudicious and unnecessary, but it may hasten the sufferer to a premature grave.

We should, on the contrary, fan the vital spark, and endeavour to encourage resuscitation.

If the injury is the result of a shock to the entire nervous system, the patient should be placed in the horizontal position, on his back, with the head a little elevated, care being taken to remove all ligatures about the neck or person. And a mustard plaster should be applied over the stomach, with bottles of hot water, well corked, to the extremities.

As soon as the patient can swallow, thirty drops of sal volatile may be given in a wineglassful of warm water, followed by a cup of tea.

If the concussion be the consequence of a blow or fall on the head, the patient should be placed in a recumbent posture, with the head well elevated, and kept cool by being sponged with a damp sponge, the extremities being kept warm by a footpan of hot water, or bags of heated salt, or mustard plasters, if more convenient. And as soon as the power of deglutition returns, he should also get thirty drops of sal volatile, or twelve drops of fluid ammonia, in water.

Such patients should be kept very quiet, and not allowed to talk much when they do rally; and they must be watched attentively, lest inflammation of the brain follow concussion.

This is indicated by the face getting flushed and the head hot, which symptoms indicate that the patient should sit up, and the head be kept constantly cool by damp rags often renewed, or cold water dropped slowly on the head, or ice in a bladder or bag of oiled silk. And if cold be not sufficient to control the symptoms of approaching inflammation, three to six leeches should be applied to each temple, according to the strength of the patient, and repeated if necessary.

The bowels and biliary ducts should also be unloaded by half a grain of podophylline in ten grains of Epsom salts, given every twelve hours, till the bowels act freely, and afterwards every night or second night till convalescence is established.

The food should be entirely farinaceous, and the drink equally mild; together with a little cream of tartar in a cup of warm water, daily, to excite the kidneys.

HEADACHE FROM SCROFULA.

We have observed formerly that scrofulous disease of the brain often remains latent for a number of years; and, when it becomes active, is generally announced by lancinating pains of the head, followed by incessant sickness of stomach or convulsions, which frequently prove fatal.

But in some cases the headache assumes a chronic form, being dull and constant, accompanied with low spirits, want of appetite, and a distaste for either exercise or amusement.

One of my fellow students at the University of Edinburgh in 1832, was the victim of this disease, assuming the latter form. He was a very diligent student, exceedingly regular in his habits, and never absent from his class; but, although he looked well enough, he was always complaining of his health; so that he was reckoned a confirmed hypochondriac, and consequently shunned by many as a companion.

His rooms were near mine, and as we both took notes of the lectures given by the different professors, we met in the evenings to compare and correct our notes. His manner on these occasions soon convinced me that his complaining was not without cause; for he would often press his head with both hands and say, if others felt what he suffered they would not call him a "hippish fellow."

Still his intellect was not impaired; his memory was very good; his mind well regulated, and well informed; and his judgment very correct.

As the session advanced, and the period arrived when the professors commence to examine for degrees, I asked him one evening in March, if he would apply to be examined early; as I wished to do so. He replied that although he thought he was prepared, still he had no intention to apply; because he had an impression that he would not survive the examinations.

His conjecture was correct. That same night he was seized with convulsions, which terminated his sufferings towards morning. And at the post-mortem inspection, a large portion of his brain was found occupied by a suppurating scrofulous tumour.

SICK OR BILIOUS HEADACHE.

This kind of headache is of a different origin, and is always the creature of indigestion. Persons suffering from it have the tongue coated, and the stomach loaded with food they cannot digest; and future attacks can be escaped only by attending to their stomachs and altering their habits.

As a rule the stomach requires five or six hours of an interval between each meal; and those who deviate much from this rule, and force upon the stomach fresh work before its former task is completed, or who overload the stomach with a quantity of rich food or drink beyond what the constitution can bear, have no reason to complain if they be obliged, afterwards, to pay the forfeit.

A wish to appear sociable and comply with the customs of those we mix with is, I am aware, the cause of much suffering to many individuals; because all cannot eat the same food, nor consume the same quantity of drink, with equal impunity. Besides, the stomach has its idiosyncrasies, which must be attended to by those who wish to enjoy good health. Nor is it possible to prescribe a regimen that will be equally suitable for all.

To eat and drink with safety, each must take the trouble to register his own experience, and be attentive in following this as his guide.

The gastric juice can digest only a certain quantity, and all that is swallowed beyond that, either remains as a burden to the stomach, or passes in an undigested state into the bowels, irritating them, and by reflex nervous sympathetic action of the system deranging the entire machine.

Sick headache is, therefore, the usual penance done for the excess of the previous evening; or of the accumulation of accessions indulged in for some time past. And the person awakes generally at an early

hour with a coated tongue, feeling of nausea, and dull headache, increased by motion or stooping.

Treatment.—In every case the best remedy is thirty grains of ipecacuan as an emetic, taken in a cupful of water, half at once, and a tablespoonful of the remainder every ten minutes till it acts; after this tepid water should be drunk to encourage vomiting, till the stomach is perfectly cleared out.

As soon as the action of the emetic ceases, a cup of tea and a little dry toast soothe the stomach; and two hours afterwards, the patient should take half a grain of podophylline and ten grains of Epsom salts in syrup, to relieve the bowels and the biliary ducts and gall-bladder.

Few stomachs injured in this way can digest food for some days. Many do not recover a healthy tone of action for weeks, and require the greatest care in eating and drinking, to enable them to rally. To spare the weakened powers for a time is the surest remedy, but half a grain or one grain of quinine twice a day hastens improvement; the bowels being regulated by two grains of aloes and ten of Epsom salts, taken at night, when required.

NERVOUS HEADACHE.

This is the concomitant of chronic dyspepsia in an irritable constitution. Persons who suffer from it may not be chargeable with either eating or drinking to excess; yet they fail to treat their stomach as it requires. For if they do not err in quantity they do so in the quality of their ingesta, or they neglect to pay proper attention to the "workshop" of their health.

Many who abstain from wine and other alcoholic stimulants drink tea and coffee in excess, and by thus irritating the nervous system get, as a consequence, constant lancinating pains of head.

Others by the use of tobacco in some form inflict similar injury on the stomach and nervous system, and are martyrs to constant headache.

Some, intent on business or pleasure, neglect to take food at proper intervals; and when the whole system is fatigued, they crowd upon the weakened stomach at once, or in a few hours, as much food as should be eaten during the entire day.

Others, while they take food at proper intervals, remain in close apartments and take no exercise, forgetful that motion is one of the laws of our existence; and that food when digested must be vivified

by oxygen from the open air, before it can afford nourishment to the muscles and nervous system.

To escape nervous headaches these habits must be altered. The tea drinker (and coffee is still worse) must take milk and water in preference; the tobacco consumer must abandon his weed; the devotee to business or pleasure must relax his pursuits; and the indolent inactive recluse must adopt early hours, and by exercise in the open air aid in the production of his life's blood.

Travelling, by affording exercise, change of air and of scene, is a never failing remedy for such patients, and should be adopted.

RHEUMATIC OR GOUTY HEADACHE.

This, which is popularly termed neuralgic headache, is also the product of dyspepsia in constitutions prone to gout or rheumatism.

It is often seated at or near the crown of the head, occupying a space about the size of a half-crown piece, when it is called the hysterical headache; but men of the nervous temperament are equally subject to it as women. Frequently we find it on the brow, extending towards the temple; or on the face, from the bridge of the nose to the angle of the jaw.

It is especially troublesome when it attacks the jawbones, and the membrane that lines the sockets of the teeth. When this membrane becomes inflamed, suppuration is the common result, and the fangs of the teeth become diseased, while the crowns or tops of these teeth may be perfectly sound; and the suffering in such cases can be appreciated only by those who have experienced it. One of my patients became perfectly monomaniac from this cause, but recovered immediately after the teeth were extracted.

Treatment.—Tonics, of which the iodide of potassium is generally the most efficient, are the most serviceable for rheumatic headache. Two grains of the iodide in a wineglassful of water, after breakfast and dinner, will generally succeed; but if the gouty diathesis prevails, one grain of the acetic extract of colchicum, and one of aloes, should also be given in a little syrup each night. Colchicum, in some instances, disagrees with the patient, causing distressing nausea and prostration of strength, and in such cases the tincture of *actæa* (black snakeroot) in doses of sixty drops at night, with the iodide during the day, as before, has a good effect.

The diet should be light and easily digested, avoiding ale, porter, wine, and spirits, and the body should be warmly clothed, and braced

by frequent shower baths, with plenty of friction afterwards, and constant exercise in the open air.

Rheumatic headache may also assume an intermittent character, recurring, once in the twenty-four hours, at a particular time. For this form quinine is the proper remedy, and five grains, taken in a little sugar, half an hour previous to the time of the expected attack, for two or three days in succession, and one grain at that hour for a week afterwards, seldom fails to cure, if the bowels be moderated by two grains of aloes and ten grains of Epsom salts, taken in a little syrup at night, as required.

When rheumatism attacks the membrane lining the sockets of the teeth, it is generally taken to be toothache, from caries of the tooth; and the disease is neglected until the fangs have become diseased, and then nothing but extracting the teeth can be serviceable, so that many persons, early in life, have been obliged to lose their teeth, and get an artificial set. This is not desirable, for even the best adapted come far short of the comfort and utility of nature's production.

A little attention to the character of the disease will enable any one to discriminate, and the iodide of potassium, with proper attention to the state of the stomach and the skin, seldom fails to check the inflammation, if taken in proper time.

HEAVY HEADACHE.

A sensation of weight in the head is common to persons of full habit, who make too much blood; and it affects them most when they stoop, or if they indulge in sleeping too long.

Treatment.—Such persons should never eat suppers; they should live abstemiously; they should sleep with the head and shoulders a little elevated; they should exercise freely in the open air, and pay constant attention to the state of the bowels.

SUN-STROKE.

This is a disease peculiar to hot climates, or to temperate climates in very hot weather. In Australia it occurs frequently to men of intemperate habits, who expose themselves to the heat of a vertical sun; and also to laundresses who wash in the open air, with the head stooping over hot water, while they are exposed to the sun's rays. It is certain also that when the atmosphere is loaded with moisture, heat is doubly dangerous, and sun-stroke much more fre-

quent than when the air is light and dry, although the thermometer may stand considerably higher.

The symptoms of sun-stroke vary in different cases. Some, when affected, get giddy and sick at stomach, and afterwards become insensible. Others are taken more suddenly, and fall in a swoon, from which they never recover.

Treatment.—Bleeding is equally unnecessary in this attack as in concussion of the brain, and the treatment we advised for it will serve in this case also. In both the nervous system has suffered a shock, and our object should be to assist it to rally and recover.

The symptoms in sun-stroke indicate congestion of the brain, which is best relieved by cold applications to the head, and warmth to the extremities. All ligatures about the neck and waist should be removed, and the head, being raised moderately, should be kept cool by wet cloths frequently renewed, or by ice, or dropping cold water slowly on the head; and to rouse the vital energy, thirty minims of sal volatile, or twelve drops of fluid ammonia, in a wine-glassful of warm water, should be given every hour, till the patient rallies. If sal volatile be not at hand, half a glass of brandy-and-water may be substituted, and followed by a cup of tea; while a mustard plaster is applied over the stomach, and the feet are kept warm by bags of heated salt, or heated bricks rolled in flannel.

With those who recovered from sun-stroke, I observed that the biliary secretion was in excess for some time afterwards, which led to the conclusion that a congested state of the liver had, in all probability, been an exciting cause of the attack, and the reason why these persons suffered, while others, equally exposed, had escaped.

To relieve the system of the redundancy of bile, such patients should get half a grain of podophylline, with ten grains of Epsom salts, every twelve hours, till the bowels act freely, and then every night or second night, till perfectly recovered; and no heavy rich food should be eaten for some days after an attack of sun-stroke.

EPILEPSY, OR THE FALLING SICKNESS.

This is a disease of the nervous system that may proceed from a variety of causes. Its attacks are always very alarming to look at; but as the patient is not conscious during the attack, and recollects nothing of it after he recovers, we have no reason to conclude that he suffers much pain at the time.

Serious injuries are often inflicted during the attack by the vio-

lence of the muscular spasms. Some patients knock their heads with such violence against the ground or place they lie on, as to endanger the safety of the skull, and the tongue seldom escapes injury from the gnashing of the teeth. Joints are sometimes dislocated by the muscular efforts, and bones fractured by striking against objects.

To keep patients still during the fit would be impossible, but they ought to be so far restrained as to prevent injury to their persons ; any greater restraint being both injurious and unnecessary.

First attacks are usually slight and of short duration ; but as the disease advances, it seems to acquire strength, to become more frequent in recurring, and more unwilling to depart.

In some instances the attack comes on very suddenly, and the person, without any previous warning, utters a shrill cry and immediately falls. The features are distorted, every limb is convulsed, the breathing is short and difficult, the pulse is small and intermits, the surface is cold, the eyes are open and either turned up or rolling wildly, while the pupil is insensible to light ; the tongue is generally protruded, and froth issues from the mouth. A heavy sleep follows this excitement, and after some time the sufferer awakes, languid and unconscious of anything that has happened.

On the contrary, some patients have previous notice of an attack, which they describe in varying terms. One will liken it to a stream of water trickling over some part of his body. Another compares it to a feeling of creeping commencing in some part, a foot or finger, or perhaps some old wound, and extending from that to the stomach or the head ; and then the person falls and is no longer conscious. This nervous sensation, or premonitory symptom, is called the "aura epileptica."

An attack or fit may continue for a few minutes only, or, with slight intermissions, it may be prolonged for many hours ; the danger of recovery being always increased in proportion to the duration of the attack.

The general rule is, that persons prone to this disease are pale-faced and of delicate constitutions, inactive, and deficient both in mental and bodily energy ; but to this I have seen some marked exceptions. The greatest sufferer I ever prescribed for, was a robust man of florid complexion, and extremely active habits ; with whom the disease commenced in his forty-fifth year, and proved fatal about five years afterwards. No examination would be allowed after

death ; but it was reasonable to conclude that the disease originated from injury done to the nervous system by his formerly intemperate habits.

Many class this as one of our hereditary diseases, for which there seems no good reason ; because it is frequently produced by circumstances that can have no alliance with hereditary taint ; such as painful dentition, worms in the bowels, bony spiculi growing on the inner surface of the skull, and by their pressure irritating the membranes of the brain ; violent passions of the mind, as anger or extreme fear ; the loss of too much blood after a miscarriage or accouchement ; or by imitation, as happens occasionally in ladies' boarding-schools.

In some instances it seems to be congenital, and associated with a peculiar formation of the skull ; as children, whose heads are irregular in shape, are observed to be especially subject to convulsions.

A very painful feature in the effects of epilepsy, is its tendency to affect the mind and weaken its reasoning powers. It is true that persons of gigantic mental compass, as Alexander and Napoleon the Great, are reported to have suffered from it occasionally ; but those who have frequent recurrences of its attacks, soon begin to show an imbecility of mind, and become unfitted for taking part in the active business of life. They may be rendered idiotic.

Treatment.—During the seizure little can be done, except to prevent the patients from injuring themselves ; and the first care should be to protect the tongue, by inserting a cork, or piece of soft wood, between the teeth. Cold applications to the head are calculated to do good, but the restlessness of the patient is apt to displace them, and sponging the head is preferable.

As attacks frequently occur during sleep, persons subject to epilepsy should have wide beds, not much elevated from the floor, with a sheet from post to post on either side to prevent the patient from rolling out, or fracturing his bones by striking against a board or other object.

Infants when attacked with convulsions when teething, should be put into a warm bath from 98° to 100° Fahr., which is always serviceable to them, and seldom fails to shorten the attack. When the fit is over, if the child's bowels are confined it should get a dessertspoonful of castor oil, or one grain of aloes with five grains of Epsom salts in syrup ; but if its bowels be relaxed, it should have a teaspoonful of chalk mixture every six hours till lax abates.

Next day the child's gums should be examined and scarified, if

necessary ; but the fit might be renewed by scarifying the gums before the effects of the former attack were perfectly recovered from ; unless it be done in the lull, immediately after the attack.

The child's food should be breastmilk only, or if weaned, equal parts of cow's milk and water, with a little sugar in it ; the head should also be kept cool by constantly sponging it, and the bowels should be carefully regulated.

When epilepsy is caused by worms or accumulations in the bowels, turpentine is an efficient remedy ; and half an ounce of oil of turpentine and an equal quantity of castor oil would be the dose for a youth of fourteen or fifteen years, and should be given before breakfast, the child remaining in bed till it begins to operate. For a strong man, one ounce of turpentine and half that of castor oil would be the dose. And if any portion of tapeworm is ejected, the round head with black streaks upon it should be carefully looked for, and until this is thrown off, the dose must be repeated at least every third day. For if the head be left in the bowels, the removed portion of the worm will soon be replaced, and the fits renewed.

Epileptic subjects should be particularly careful of their diet and drink. Rich food, pastry, and made dishes do not suit such patients ; pig's flesh in any form is injurious to them ; alcoholic stimulants are not admissible ; tobacco is equally injurious to their health, and the excitement of tea and coffee acts unfavourably. Epps's cocoa, or equal parts of milk and water, with sugar according to taste, should be substituted for tea and coffee ; and the use of animal food should be limited to fowl, or the lean of good beef or mutton, once a day for dinner.

Those under my care who could be persuaded to become perfect vegetarians, required the least medicine, and obtained the most permanent recoveries.

When turpentine, given in proper dose, proved that the disease was not caused by worms or accumulations in the bowels, but by a deranged state of the nervous system, my next remedy was one grain of the valerianate of zinc, and one grain of aloes, in pill or a little syrup, after breakfast and dinner, to improve the tone of the nervous system and the digestive organs.

This having failed to effect a cure, I prescribed one-fourth of a grain of nitrate of silver (caustic), and one grain of aloes in pill, after breakfast and dinner ; the nitrate of silver to be increased by one-fourth of a grain every second day until one grain was taken twice

a day. The nitrate of silver is best suited for patients who have injured their digestive powers by previous excesses ; and it does all that tonics can accomplish. It is true, that the complexions of patients have been permanently stained a slate colour by the use of nitrate of silver, but in these cases the dose had been made too large—five grains three times a day. Such heroic treatment need not be imitated, for one grain taken twice, or at most thrice a day, is quite sufficient ; and in these doses it produced no discoloration of the skin, although some of my patients used it, at intervals, for years in succession. But should there be any dread of this peculiar influence of the nitrate of silver, the iodide of potassium acts as an antidote to this, and two grains of the iodide in a wineglassful of water at night, secures the patient against any discoloration from the caustic.

CATALEPSY.

This is also a nervous disease, but in its manner of attack it is the opposite of epilepsy. The patient is not convulsed, but remains perfectly still in whatever attitude he or she may be placed.

Persons affected in this way seem to be in a profound sleep, quite unconscious of anything occurring around them, in which state they may remain for hours, and then awake suddenly, having no recollection of anything happening in the interim.

A similar state of the mental faculties can be produced by mesmerism, by which the power of volition on the part of the patient seems to be transferred to the will of the operator. It may also be induced by any individual of high nervous susceptibility fixing the eyes and attention for a given time solely on one object, especially if the object be bright, and placed on the forehead, a little above the eyes, obliging the person to look up.

Treatment.—For this disease tonics are necessary, and iron is generally the best form. Ten drops of the solution of the perchloride of iron in a wineglassful of water, after breakfast and dinner, seldom fails to cure. But the diet must be mild, and easily digested, stimulants and strong tea or coffee avoided, and the bowels regulated by two grains of aloes and ten of Epsom salts, at night, when required.

LOCKED-JAW OR TETANUS.

This is another nervous affection of the spasmodic class. It commences with the muscles at the back of the neck and the root of

the tongue, and soon extends to the jaws, causing their muscles to contract with insuperable rigidity, while the contracted brows and pitiable expression of countenance declare the severity of the patient's sufferings.

The pain in locked-jaw is incessant ; still there are exacerbations, at short or distant intervals, according to the severity of the case, on which occasions the pain is more intense, and the sufferings can be partially estimated only by those who have had severe cramps of the bowels and legs.

The tetanus, or spasm, frequently affects the muscles along the spine, which by their powerful contractions cause the body to be elevated in the form of an arch, resting on the head and heels ; or the abdominal muscles, and those on the chest, may be affected with spasm, causing the body to be bent forwards, and the head to touch the knees.

This fearful malady may result from exposure to cold, such as sleeping on damp ground, or it may be produced by injuries or wounds. And wounds of the muscles that form the ball of the thumb are popularly believed to be followed by locked-jaw, but I never met such a case. But although we know that it may supervene from exposure to cold, still my experience leads me to think that it occurs oftenest in hot climates.

In Sydney I consulted for a lad who, with others, had been riding on a board balanced across a low wall, and had fallen backwards upon his head and shoulders. He walked to church next day, complaining only of a stiff neck. Next morning tetanus had set in, and he died that evening. No examination would be allowed, and we could only conjecture that there had been partial dislocation of the cervical spine.

Another lad got his great toe fractured and contused, by a stone falling from the top of a wall, over which he attempted to climb ; so that it was necessary to amputate the toe. Tetanus set in the fourth day after the accident and operation, and also proved fatal.

In a third case the cause of tetanus seemed very slight. A young man in perfect health got a simple fracture of the leg by a fall from his horse, when riding out for exercise. The fracture was treated by a skilful surgeon, and promised favourably for a few days ; when the patient was seized with tetanus so unyielding, that it resisted all efforts to control it.

In this lamentable disease, the jaws become so firmly locked, that it is impossible to open the mouth to introduce either food or drink.

Consciousness is still retained, and the sufferer is eager to drink, but his efforts to open the mouth are perfectly unavailing.

Two of the front teeth have been extracted to allow food and medicine to be conveyed to the stomach; but this expedient is not absolutely necessary, as a tube for this purpose can be passed into the throat by either nostril; or through the aperture behind the wisdom teeth.

All the cases that I have seen, except one hysterical case alluded to in the article on hysteria, resulted from injuries or surgical operations, and left an unfavourable impression of the power of medicine to control this disease; but an attack originating from exposure to cold without other injury would, no doubt, be more manageable.

Treatment.—In such nervous affections the great object is to alleviate pain and lessen the anguish of the unfortunate sufferer. This is best done by giving opium in a fluid form, either laudanum in dram doses, or the muriate of morphia, one grain in solution, every four, six, or eight hours, according to the severity of the spasms, as solid opium does not act satisfactorily in such cases.

The bowels are always obstinately costive; and for this difficulty I have found equal parts of turpentine and castor oil, half an ounce of each, given by the mouth in the evening, and the same quantity thrown up into the bowel as an enema next morning, very serviceable.

For relaxing the spasms and alleviating pain some prefer the use of chloroform: but it is too hazardous a remedy to be recommended as a family medicine in this or any other disease.

Nourishment for such patients is absolutely necessary. The constitution, writhing under constant pain, is soon exhausted, and requires support; and beef or mutton tea, or chicken broth, or thin gruel, with a teaspoonful of Liebig's essence of meat in the gruel, should be given every three hours, unless the patient be asleep.

A warm bath soothes, and is grateful, and should be repeated every evening; while care is taken to keep the body sufficiently covered, and the extremities warm.

SAINT VITUS'S DANCE.

This is also a nervous disease, slightly spasmodic, and is called "Chorea," the Greek word for dance. It attacks youths, either male or female; but the latter more frequently than the former, and,

although easily cured by proper care and attention, it may be rendered permanent by neglect.

It commences with irregular twitches of the muscles of the face, and imperfect action of the tongue, which are soon followed by jactitation of both the upper and lower extremities.

The patient cannot remain in one position for a minute, but is constantly shifting and turning; and any attempt to walk is made by runs, hops, or leaps, and never in a straight line, because the muscles are more affected on the one side than the other.

The mind is little affected, and volition has power to a certain extent, but is so feeble as always to come short of the intention. In the effort to take nourishment, the hand may be raised with sufficient firmness; but it is certain to be suddenly arrested and turned back before the morsel of food or drink arrives at the mouth.

The distortions and grimaces, in some cases, are so ludicrous that those who are strangers to the influence of this disease might readily imagine them to be assumed in the way of tricks. And although the patient wishes to control them, and in some instances can by an effort do so for a short time, yet they are always increased by the presence of strangers; nor do they ever cease, except when the patient sleeps.

On enquiry as to the commencement of an attack, we generally learn that the patient had lately been unusually excited, or the subject of fright; some person covered with a white sheet, having, for amusement, appeared to the patient in a dark place, a species of merriment which is very reprehensible; or having been rushed upon by a violent dog, or other dangerous animal.

In addition to these exciting causes, we find also that such patients are either suffering from dyspepsia, or the presence of worms in the bowels.

Treatment.—Half an ounce of oil of turpentine, and an equal quantity of castor oil, given in the morning, the patient remaining in bed until the medicine begins to operate, is the best medicine to commence the treatment of this disease. And if worms be evacuated of the broad or tape species, accurate search should be made for the head, known by being round, and having black streaks upon it; and if the head still remains in the bowels the same dose should be repeated every third day until it is removed. But if the head has been removed, or if there was no appearance of worms after the first dose, it will be sufficient to repeat this dose once a week till the child recovers.

After the first dose of oil the patient should get some tonic medicine, and iron is preferable in most cases. Two ounces of the carbonate of iron should be mixed with a pound of treacle, of which a teaspoonful should be taken after breakfast and dinner; or ten drops of the solution of the perchloride of iron, in a wineglassful of water, taken through a glass tube to save the teeth, does equally well, if taken twice a day.

In addition to this, the patient should have a shower bath every morning, tepid at first, and cooled down gradually, as the cold is more efficient.

The food of such patients should be light and easily digested. They should not have tea nor coffee, but milk with stale bread, for breakfast. For dinner they may have a little roast fowl, or the lean of good beef or mutton, in moderate quantity, with a mealy potato or other light vegetable; and milk and stale bread in the evening for supper. But constant attention should be paid to the state of the bowels, which should be regulated in the intervals between the doses of oil, by two grains of aloes and ten grains of Epsom salts, given in syrup at night, when required.

Such patients should not be allowed to attend school, because others might acquire the disease by imitation, and quietness conduces much to hasten and perfect the recovery.

The only incurable case that occurred to me was that of a youth, whose residence was convenient to an iron foundry, which he was very fond of visiting, and the noise of which kept up the disease, in despite of medicine. Finding that to be the case, I requested that the young gentleman should be sent, as a visitor, to my house for a time. The change had the desired effect, and in a few weeks he was perfectly recovered; and when he returned home, I gave strict directions that he should not be allowed to go into the noisy foundry. My admonition was, however, neglected, and a fresh attack of the disease was the consequence.

I then declined to take charge of his case; and although he was treated by a gentleman of great judgment and experience, the late Dr. Bland, the noise of the foundry counteracted the good effect of every remedy, and the disease remained for life. The other members of the family were all talented, and he was equally gifted, but the continuance of the disease weakened his mind, and hastened him to a premature grave.

HYSTERIA.

This is another nervous disease, which is occasionally accompanied with spasmodic action.

Its name implies that it is derived from a diseased state of the womb; but we often meet with men who are hysterical, especially drunkards.

I have always found it associated with dyspepsia and flatulence of the stomach and bowels, amounting in some cases to borborigmus, or a rumbling noise in the bowels.

With hysterical patients, flatulence of stomach is not relieved by eructation; on the contrary, when the gas ascends into the throat, it is arrested in its passage by a spasm of the muscles of the oesophagus, causing the "hysterical ball" in the throat, which has often made nervous women fancy they were about to be suffocated. The feeling is certainly alarming, but there is no danger, because the spasm must relax before suffocation could be produced.

An hysterical fit, like the disease last noticed, may be produced by fright, or other mental emotion, as extreme joy, disappointment, or anger.

If the exciting cause be pleasurable, the patient laughs immoderately, and terminates with a fit of sobbing and crying. If disappointment influences the feelings, weeping alone will be the result. But if anger be the motive power, the patient shrieks violently, gesticulates wildly, beating her chest, or rending her clothes or her hair, and when exhausted sinks down flooded with tears.

Such symptoms appear in well marked cases; but no other disease is so Proteus-like in its forms as hysteria. It assumes such a variety of figures, and simulates other affections so nearly, that it is often exceedingly difficult to discriminate.

The hysterical cough has often caused a great deal of anxiety about a young lady's lungs, when they were perfectly sound. This cough, however, like most counterfeits, is generally overdone, and, by an educated ear, is discovered by its loudness and barking tone. And hysterical loss of voice is a frequent occurrence.

The hysterical pain of back has often been leeches, cupped, and blistered, as disease of the spine; and has frequently puzzled experienced practitioners.

Hysterical lameness imitates disease of the hip joint so accurately as to be very perplexing; while hysterical neuralgia traverses the entire person, from the crown of the head to the sole of the foot;

counterfeiting pleurisy, inflammation of the female bosom, and other organs.

Nor do I mean to say that complaints uttered by such patients are unworthy of attention, or made without cause. On the contrary their sufferings are real, and often acute; but they are not of the inflammatory order, nor to be relieved by punishing the sufferer, or reducing the strength of the patient by confinement to bed or a sofa, nor by the lancet and blistering.

The nervous system is the seat of the disease, and it must be improved by altering the state of the blood; improving the state of the stomach and bowels; removing any local cause of irritation, such as hollow teeth, or anything calculated to annoy the mind; abstaining from strong tea and coffee, together with all alcoholic stimulants; and bracing the system by frequent shower baths, tepid in winter and cold in summer, and by constant moderate exercise in the open air, especially on horseback.

When on a visit to Liverpool, prior to my emigrating to Australia in 1840, I was taken by a medical friend to see a patient of his, who had got an attack of tetanus, or locked-jaw, without any exposure to cold, wound, or other injury; which he said was a form of disease he had not met before. In this case the prominent symptoms of tetanus were well marked; for in addition to the fixedness of the jaws, the muscles along the spine were occasionally so contracted that the body was raised off the bed in the form of an arch, and resting only on the head and heels; and so violent were the spasms, that the patient had to be constantly protected from being jerked out to the floor.

An exacerbation had occurred at the time we visited, and we found the patient with the body elevated off the bed, as described, and the countenance indicative of intense suffering. After some time the spasms relaxed, and the body sank suddenly down upon the bed, but the jaws were still rigid.

As the sufferer was a girl, about seventeen years of age, I told my friend his case was one of hysteria; and by the usual treatment for such patients, combining tonics with anodynes, she recovered perfectly.

But hysteria is not always accompanied with spasmodic action of the muscles. It sometimes assumes the opposite tendency, depriving the patient of all voluntary muscular action and motive power. A young female in the neighbourhood where I afterwards had charge of a dispensary in Ireland, was confined to bed for

fourteen years ; and although her appetite and other indications of health were usually good, yet she was so powerless that she had to be waited on like a child. At length a fire occurred in the house, and communicated with her apartment, when she leaped out of bed and ran into the street.

The effect was permanent, and she could use her limbs ever afterwards ; which shows that as a fright may cause hysteria, it may also cure it.

Treatment.—As constipation, or worms in the bowels, often cause hysteria, it is good practice to commence the treatment with a full dose of turpentine and castor oil, half an ounce of each, taken in the morning, the patient remaining in bed till the medicine begins to act. And strict attention should be paid to the dejections, to ascertain if worms are thrown off.

If tapeworm be voided, the round head with dark streaks upon it, should be searched for ; until this is secured, the dose should be repeated every second or third morning. If indurated masses appear, the dose should be repeated once a week, for some time. But if the dejections seem natural, it will be sufficient to regulate the bowels by two grains of aloes and ten grains of Epsom salts, in pills or syrup, at night, when required.

Tonics are always serviceable after the bowels have been regulated, and iron is generally the most suitable. Two ounces of the carbonate of iron in a pound of treacle, of which a teaspoonful is to be taken after breakfast and dinner ; or, ten minims of the solution of the perchloride of iron in a wineglassful of water, taken as often, seldom fail to produce a good effect. But in using either, care is necessary ; for the iron being heavy falls to the bottom, and requires to be often stirred ; and the acid solution should be taken through a glass tube, to protect the teeth.

If in any case iron should fail to produce the desired effect, one grain of the valerianate of zinc, together with one grain of aloes, should be taken in pill or syrup, after breakfast and dinner. But no medicine can cure without necessary attention to food and regimen during the treatment.

The diet should be light and easily digested ; rich food, pastry, made dishes, and salted meats are highly objectionable ; strong tea, especially green, often causes hysteria, and coffee is equally injurious ; while ale, porter, wine, and spirit are pernicious to such constitutions, and should be avoided.

Plenty of exercise in the open air, either by walking or riding, is

very salutary, while late hours and crowded rooms are the opposite. And nothing is more injurious than the reading of sensational novels, which always increase hysteria.

A shower bath every morning, tepid in winter and cold in summer, and sea-bathing in the season, are highly commendable. And when fits of hysteria occur from anger or passion, a jug or two of cold water poured over the head and face of the patient is the speediest remedy.

When joints, either of the elbow or knee, become fixed or stiff by hysterical contraction of the muscles, cold water poured on the joint is the best application ; but it must be persevered with till the muscles relax, and be repeated if necessary.

Parents and the conductors of schools should recollect that hysteria is often acquired by imitation ; and young persons should not associate with those who suffer from it.

HYPOCHONDRIASIS.

THIS is a nervous disease, the opposite of those lately noticed. In this affection we see a want of excitability, accompanied with despondency of spirits and remarkable lack of energy.

Some consider it a species of mania, or aberration of mind. I have never found it so at the commencement ; but as the mind and body are mutually dependent on each other, like other nervous affections proceeding from a deranged state of the system, if neglected or long continued it seldom fails to make an unfavourable impression on the reasoning powers of the patient.

Its name signifies a disease the origin of which is seated under the false ribs ; and although this definition dates from the days of Hippocrates, yet I believe it is corroborated by modern experience, and that we invariably find this disease associated with a diseased state of the stomach and liver, and especially the latter organ.

As hysteria is said to appertain only to the female sex, in like manner hypochondriasis is considered the prerogative of the male sex ; but as the former have not been allowed to retain exclusive possession of the first malady, so a portion of the latter is occasionally usurped by some of the fair sex, and we do meet with females truly hypochondriac.

Of all the diseases common to humanity, the tendencies of this affection are the most selfish. The patient is constantly absorbed in

attention to the state of his own health : he registers every unusual feeling of the slightest kind, anticipates the worst consequences, even death, from any trivial change, and is so decided in his convictions that it requires great tact on the part of either friend or medical practitioner to dissuade him.

The character of such sufferers is soon completely changed. Those who were formerly bold, or even brave, become timid and pusillanimous. They seldom wish to injure others, but from a morbid sensibility, an exaggerated estimate of their own suffering (as was the case with one of my early friends), and a false impression of their own worthlessness, they are often prone to commit suicide, and thus relieve society of an incubus.

Nor is any class of society exempt from this disease. The Australian shepherd, who in the wild bush lives on salt meat and "damper" (which is flour wet with water to form dough, toasted in the embers of a wood fire), drinks strong tea, and smokes tobacco as his only solace, is often the subject of hypochondriasis.

The retired squatter, merchant, or lucky gold-digger, who acquired his ample fortune by hard toil and constant activity, when he changes his habits, reclines on the lap of luxury, and indulges in the repose of indolence, pays, generally, the same penalty, finds that all the anticipated sweets turn bitter in the enjoyment of them, and becomes the victim of ennui.

A similar forfeit is often paid by hard-working students. Some of these, impelled by a praiseworthy ambition to excel in the acquisition of knowledge, and others of limited means, whose last pound has, perhaps, been spent in the pursuit of a profession, admission to which must be decided by the ordeal of a searching examination, are often engaged in study five-sixths of each twenty-four hours, giving no time for the proper mastication and digestion of food, and robbing the constitution of the bodily exercise it requires, as well as the necessary amount of sleep.

The drunkard and the sensualist also injure their digestive organs, and, by transgressing the laws of God, inflict upon themselves punishment.

Under any of the above circumstances dyspepsia is inevitable, and an injured stomach, together with a congested liver, acting on the nervous system, soon produce hypochondriasis, with all its train of gloomy apprehensions.

Treatment.—To improve such patients the order of things must be reversed.

The shepherd must return to civilized society, eat fresh meat and vegetables, and discard tea and tobacco.

The luxurious recluse must fare sparingly, and find active employment by travelling.

The close student must abandon his books, and court amusement and out-door exercise.

And the sensualist must forsake his former habits.

These rules being attended to, the injured stomach and congested liver should be assisted by medicine. For the latter, half a grain of podophylline and ten grains of Epsom salts, taken in a pill or syrup, every night at first, and then every second or third night for some weeks, is an efficient medicine, equal in its effects to mercury, and much safer for the constitution.

To improve the tone of the stomach, a wineglassful of infusion of camomile, quassia, or chiretta, taken after breakfast or dinner, has a happy effect with some; while others are more benefited by half a grain or one grain of quinine, taken after food, twice daily.

In some tedious cases of hypochondriasis, or melancholy, the tincture of actæa (black snakeroot), in thirty drops at first, and increased gradually to sixty drops, three times a day, has a decidedly good effect, after the liver has been relieved.

The action of the skin in such cases has great influence, and should be improved by frequent shower baths, followed by friction with a flesh-brush; and afterwards by sea-bathing and plenty of exercise in the open air.

DELIRIUM TREMENS.

THIS deranged state of the nervous system is caused by alcoholic poisoning of the blood.

It is said to occur chiefly to those dram-drinkers or wine-bibbers who, by some accident, have been suddenly deprived of their wonted beverage, and that consequently it is hazardous to discontinue the use of ardent spirits hastily.

With this opinion I cannot coincide. All my patients, or at least the greater number of them, had been indulging freely up to the period of their attack. And some inveterate tipplers whom I was able to persuade to change their habits, have done so at once, not only without injury, but with great benefit to their constitutions.

In such patients the depraved state of the digestive powers must be attended to; and the weakened stomach requires a tonic to enable

it to digest food. Two grains of quinine taken in a little sugar or in solution, after food, thrice a day, will give tone to the stomach, and, with attention to the bowels, will enable even the most confirmed drunkard to abstain perfectly at any time.

Some affirm, also, that delirium tremens may result from excitement of mind or intense study, without the poison of alcohol. We know that in some constitutions mental excitement aggravates the effects of alcohol, and causes a smaller quantity to produce delirium tremens; but I never met a case produced by excitement, or study, or anxiety, nor by all these combined, without the aid of alcoholic drinks.

This form of delirium is distinguished from that of fever by its being the first symptom of the attack, while, in fever, delirium is a secondary symptom, and does not generally occur for some days after the attack.

The tremor is not a distinctive mark of this disease, because we have tremor also in typhus and other fevers; nor does it always accompany poisoning by alcohol. Its presence depends very much on the excitability of each constitution; and some patients have the delirium without the tremor.

The disease is most easily discriminated and recognized by the character of the delirium; suspicion, restlessness, and distrust being its most prominent features. Watchfulness is also a peculiarity of this disease, for the patient never loses sight of his doctor or his attendant, and is always starting up to see what else is coming.

He is always haunted by imaginary evils and objects; he imagines that hobgoblins are concealed about his bed; his best friends are accused of maligning his character, and conspiring to ruin him; and he fancies that his wife, if he has one, is continually speaking evil of him; while spectres or false visions are always before his view.

When such a patient is questioned the mind is capable of being roused for a few minutes, and he may answer tolerably correctly, but soon falls back into his former reverie. He is always timid and easily restrained, unless he considers his attendant greatly beneath him in bodily powers, a state of things that should be guarded against, as it imperils the safety of both.

As moral restraint, by reasoning, is always the best, actual confinement by strait-jacket or otherwise should, if possible, be avoided; and generally a steady attendant, with a good stick in his hand to add weight to his advice, is quite sufficient. But the patient should not be left unguarded for a moment, lest he leap out of a window or otherwise injure himself.

Treatment.—Each patient should be treated according to the symptoms.

In some cases the face is pale, the head cool, and the skin moist, indicating general depression. To such I would give one grain of quinine, one grain of opium, and one grain of aloes, in syrup or treacle, every three hours, together with half a pint of beef or mutton tea, or chicken broth, after each dose of medicine, and use an enema of soap and water every morning if the bowels did not act. And these means should be continued until sleep is obtained.

As soon as the patient sleeps, even a little, the opium should be omitted during the day, and one or two doses only be given at night; but the quinine should be continued with the aloes every three hours, unless the bowels act too much, and if so the aloes should be discontinued. And as soon as convalescence is fairly established, the quinine should be given only thrice a day, after food.

Other patients have the face flushed, the head hot, and the skin dry. These should have the head kept cool by sponging it frequently with cold water, or by pouring cold water from a jug, or by a shower bath given frequently, which some patients like very much. And they should get one grain of opium, one of quinine, one of aloes, and two grains of ipecacuan, in syrup or treacle every three hours, together with nourishment as above, until sleep is obtained, to procure which is the great difficulty in this disease. After sleep has commenced, the same rule as above should be observed; and if the patient can be persuaded to take a little stale bread or rice with his beef tea, much less medicine will suffice; but it is generally very difficult to persuade such patients to take food regularly.

To procure sleep some give very large doses—three grains of opium. In my experience moderate doses, combined with quinine, have had a better effect. Some give digitalis in large doses, but of it I have no experience.

Chloroform has generally a happy effect in such cases, but is too hazardous to be used except by an experienced practitioner.

When the disease has recurred often in the same constitution, or when it is complicated with softening of the brain or other organic affection, it is apt to prove fatal, but from a first attack any moderately good constitution may be expected to recover.

In treating delirium tremens, many medical practitioners allow patients a moderate quantity of whatever stimulant they had been in the habit of taking, and consider this necessary to promote their recovery. From this opinion I have always dissented, nor did I in

my practice allow a drop of alcoholic stimulant to any patient, unless it became necessary to conceal their medicine in such a vehicle, and I never had a fatal case, nor very tedious recovery.

There is no danger in omitting the wonted stimulant, as some imagine, and the withholding of it gives the patient the only chance to abandon his habits and retrieve his character when he recovers from the attack.

INSANITY.

THIS diseased state of mind may be caused by neglected fever ; by great mental excitement, either joy or fear ; by a diseased state of the brain, or by hereditary tendency.

It is distinguished from delirium from alcohol, or from fever, by the order or system adopted by the insane, by the perseverance with which they pursue a particular course, and by the ingenuity they frequently display in endeavouring to accomplish their object.

Even the most violent have cunning enough to restrain their feelings for a time, and wait for a more favourable opportunity for their purpose, and the more moderate will often reason so plausibly that medical practitioners, seeing a patient for the first time, find it difficult to form an opinion. In many instances those only who are intimate with the patient, and observe his altered manner, can estimate the reality.

Weakness of memory and inconsistency with regard to time and place are generally the best traits to enable us to discriminate. Next to these is the knowledge of some propensity of the diseased mind, by allusion to which the patient may be taken off his guard, and induced to display the amount of aberration in his case.

If the patient be delirious on many points the disease is called mania, and if on one point only it is termed monomania.

MANIA

is always the most violent form of this disease, and generally the most curable ; and, whether produced by hereditary taint or over-excitement of the nervous system by stimulants taken in excess, it may set in gradually, the patient being only a little deranged at first and on some occasions ; or its attack may be very sudden, the person becoming at once violent and prone to destroy himself and others.

Treatment.—If moral influence can control the patient it is greatly preferable to other measures. Austerity seldom has a good effect, but well-timed sympathy rarely fails. The influence that some persons have over the diseased mind is remarkable. I have seen patients perfectly tranquil during the presence of an individual, who were frantic immediately before, and became equally so afterwards ; but it is absolutely necessary to confine some patients, both for their own safety and that of others.

To keep the head cool and the extremities warm is of great importance, and to open the bowels by an active purgative is equally necessary. For this purpose two or three drops of croton oil, according to the strength of the patient, should be given in a little sugar, or dropped on the tongue if the patient will not swallow medicine, and this dose should be repeated every six hours till it acts.

The food should be entirely farinaceous, and the drink equally mild ; tea, coffee, and all alcoholic stimulants being inadmissible.

Quietness is absolutely necessary, and with it and proper attention to the stomach and bowels I have seen admirable recoveries.

MONOMANIA

is so varied in its appearances that it cannot be described. One patient is religiously impressed, and doubting the grace of God, by which we are saved, through Jesus Christ, has a constant dread of final destruction, and the loss of his immortal soul.

Another, formerly brave perhaps in the extreme, becomes timid and pusillanimous, and is constantly haunted with the belief that all around him wish his destruction, among whom his best friends are certain to be included.

Another fancies himself of royal blood, and would dispute the sovereignty with Queen Victoria or the Emperor of Russia.

Another imagines he is made of glass, and although he will walk, and even dance, he cannot be persuaded to sit down, lest his fragile frame should break asunder.

Another thinks himself a bad coin, and advises his neighbours not to take him should his wife offer him in change.

Another is convinced that he is composed of some poisonous material, which destroys all he comes in contact with—as was the idea of one of my early friends—so that for the good of society he must commit suicide.

But the most fantastical patient of this class that occurred to me

was a gentleman in Ireland, who imagined himself pregnant, and would never travel even for a short distance without his nurse-tender, and all the necessary swaddling clothes for the expected baby, while he was perfectly reasonable on every other subject.

Treatment.—In the management of such cases the great object is to discover the original exciting cause of the aberration of mind.

If the disease can be traced to any late feverish attack, or to some unusual excitement of mind, we may entertain reasonable hopes of recovery by withholding all causes of excitement, such as tea, coffee, and alcoholic stimulants; by removing everything calculated to irritate the mind; by limiting the patient to a milk and vegetable diet; by improving the state of the stomach through the aid of light bitters, as an infusion of camomile, quassia, or chiretta, after breakfast and dinner, or quinine if it is preferred; and by unloading the biliary ducts and liver with half a grain of podophylline and ten grains of Epsom salts, taken in syrup every night for three nights in succession, and every third night afterwards, until improvement is evident.

But if the disease be of long standing, or of hereditary origin, perfect recovery is uncertain, and our best efforts usually can only alleviate the symptoms. Still no case should be pronounced hopeless, as many have recovered after having been afflicted for years.

Such treatment as mentioned above should be persevered with; the patients' confidence should be secured by kindness and sympathy, and every opportunity should be taken to direct their thoughts into a different channel, and to divert their attention from their own grievances.

In some obstinate cases, after the bowels had been freely acted on by purgatives, the tincture of actæa (black snake-root) has produced a cure where other tonics had failed.

SLEEPLESSNESS.

THIS malady is the usual concomitant, and frequently a cause, of some of the diseases lately noticed. Its influence on the digestive powers is always pernicious. Through the stomach it affects the liver also, and, by its influences, the nervous system, and especially the brain.

To enjoy perfect health human beings require at least seven hours of steady sleep each night, and for some persons eight hours would

be preferable. Nor can we deviate from this rule for any lengthened period with impunity.

It is true that persons can exist for a time with two hours' sleep, and some have not been known to sleep for months in succession, but we must not follow their example, lest we pay their forfeit, and acquire a shattered nervous system, and a constitution weighed down by premature debility.

As to the best hours for sleep, the stillness of the night was evidently intended by the Allwise Creator as the time for repose, and those who retire at ten o'clock and rise at six do best, but habit can reconcile us to any regular period.

To obtain refreshing sleep the body should be perfectly level, the thickness of the pillow being just equal to the projection of the shoulder, and most persons sleep most comfortably on the right side. To this general rule for the position of the body there are exceptions. Persons suffering from difficulty of breathing or determination of blood to the head require to have the head elevated; and those who want possession of their reasoning powers if awaked suddenly, such as the general of an army, should sleep on an inclined plane, with the head well elevated and lightly covered.

The bedroom should be spacious and well aired or ventilated, having a favourable prospect, and not exposed to cold, bleak winds, nor on the ground floor. The bed should be a good hair mattress, and the covering sufficient to retain moderate warmth.

The use of opiates to induce sleep is not commendable, unless they are required to allay the pain of a surgical operation, or some chronic disease, as cancer, and in such cases those which do not constipate the bowels or cause determination of blood to the brain, should be tried first, as three grains of the extract of *hyoscyamus* (henbane); three grains of the extract of *conium* (hemlock); or one grain of Indian hemp. If these fail we must try one grain of the extract of opium, or one fourth of a grain of the muriate of morphia, in solution.

The great objection to the taking of opiates to produce sleep is that the constitution soon becomes accustomed to them, and they lose their influence, so that the dose must be gradually increased until the blood is poisoned by them.

To secure natural sleep it is generally sufficient to take moderate exercise in the open air; to attend to the state of the stomach; to prevent constipation of the bowels; to eschew suppers and cold feet; to shun excitement of the brain by balls or concerts, or by reading sensational novels; and to leave off the use of tea and coffee if

the nervous system be excitable. And tobacco often causes sleeplessness.

When these expedients fail, other means often succeed. Some go to sleep by keeping the mind directed to a repetition of the same ideas, as by repeating the numbers up to a thousand in succession until sleep is obtained. Others have a person to read to them in a monotonous tone. Others have some bright object held opposite the forehead, to which the person is to look up until sleep supervenes, as is the custom with mesmerists. And, with many, a pillow-case filled with hops will secure sleep even when opiates have failed.

ANEURISM.

THIS is a diseased state of an artery or blood-vessel, the coats of which dilate at a particular point and form a tumour, which may burst and destroy life suddenly.

An aneurism is known by the pulsation felt in the tumour formed by the dilatation of the artery. But any other tumour seated over an artery will convey to our touch the pulsation of the artery under it, and may thus deceive us. To avoid this mistake the tumour should be raised off the artery, when the pulsation will cease if it be merely a tumour; but if the pulsation is felt in the sides of the tumour when raised between a finger and thumb, there is evidence that it is an aneurism.

The aorta is the largest artery in the body. It commences at the heart, extends up near the top of the chest, where it forms an arch from which arteries are given off to supply the head and upper extremities, and then passes down in front of the spine to the lower part of the abdomen, where it terminates in the arteries that supply the lower extremities. Aneurisms of this artery may occur either in the chest or the abdomen; but they are often discovered only after death, and when observed during life are little under our control.

Aneurisms occur most frequently in the carotid artery of the neck, that supplies the head, in the subclavian artery that passes under the collar bone to supply the arm, and in the femoral artery at the thigh, where it passes behind the knee joint to supply the leg.

These arteries being near the surface are readily noticed, and when early attended to can be cured by compression properly applied by a medical practitioner, or, if this fail, by tying a ligature around the artery above the tumour.

VARICOSE VEINS.

THIS is a distended state of the veins of the lower extremities, especially below the knees.

The veins of the lower extremities having to raise the blood returning to the heart against gravity, are provided with valves, to prevent the blood being pressed down again by the action of the muscles in walking. But when garters or other ligatures are worn, especially below the knees, the blood is impeded in its passage upwards, and some of these valves are forced downwards and destroyed, thus allowing a large quantity of blood to fall upon the valve below, by which the vein becomes distended, and may finally burst.

Treatment.—If attended to early, an elastic stocking, made to fit accurately, prevents further injury; but a permanent cure can be obtained only by a surgical operation, by which the diseased veins are obliterated, and the current of blood directed to another channel. As a preventive measure, garters, if worn at all, should be placed above the knees, so that the action of the tendons at the hough may relieve the pressure off the veins when walking. Waistbands or belts should be discarded, because they obstruct the free circulation of the venous blood; and any tight ligature around the neck, by pressing on the jugular veins, may cause apoplexy.

THE LYMPHATIC GLANDS.

THESE glands often become enlarged and inflamed; and this is particularly the case in constitutions of the scrofulous diathesis.

When the glands of the neck are affected it is called the "King's Evil," because it was formerly imagined curable by the royal touch.

When the glands of the abdomen are enlarged in children, the disease is termed marasmus or wasting, because the inflamed glands cannot absorb the chyle; and the child is starved, no matter how much food it may consume.

Treatment.—In childhood, when the glands of the neck assume an inflammatory action, they should be attended to, because suppuration soon sets in, forming an abscess, and leaving an unsightly eschar as the result. This may be prevented by covering the tumour with a plaster of ointment made with two drachms of iodide of lead to an

ounce of rendered suet, spread on soft leather, and renewed as often as the ointment wastes, until the tumour disappears. If this irritates the skin too much, the iodide may be lessened one half.

For youths the same ointment is equally applicable ; but with it they should have two grains of the iodide of potassium in a wine-glassful of water after breakfast and dinner. This dose would be sufficient for a person of fifteen years, and one grain for a child of seven years.

Sores on the hands or feet often affect the glands in the armpits or the groins, which should be similarly treated. And in every case of enlarged glands the food should be light, and the bowels regulated.

Children with marasmus should also have a plaster of iodide of lead ointment worn over the bowels, together with cod-liver oil, half a teaspoonful after food, increased gradually to a dessertspoonful three times a day. In the treatment of children when wasting suitable food and change of air should be attended to. Gruel, panado, or arrowroot are too heavy. Fluids suit best, as milk, Liebig's essence of meat, the juice of fowl boiled in vacuo, or the juice pressed from the lean of raw beef or mutton. Sea-air is serviceable.

Diarrhœa should be checked by a teaspoonful of chalk mixture, given when required.

An aperient is seldom required, but if so, ten grains of Gregory's powder are generally sufficient. But the mercurial "grey powder," which should be banished from every nursery, is highly injurious.

GOITRE.

THIS is an enlargement of the gland situated at the lower and front part of the neck, in the centre. It is prevalent in Switzerland and India, and occasionally increases to an enormous size.

Pain is seldom caused by it, but patients are anxious to have it removed because it is unsightly, and is sometimes associated with cretinism, which is a form of idiocy.

Treatment.—Iodine is the most efficient medicine for this disease. Three grains of the iodide of potassium in a wineglassful of water should be taken after breakfast, dinner, and tea, and the tumour should be constantly covered with a plaster of iodide of lead ointment (two drachms to the ounce of rendered suet), the plaster being renewed occasionally ; and alcoholic stimulants should be avoided.

CANCER.

THIS, like tubercular consumption, is a disease of the constitution, caused by a deranged state of the blood. It is generally admitted to be an hereditary disease : although instances occur in which the hereditary taint cannot be satisfactorily traced.

When questioned as to its origin, patients frequently refer to some injury to the part as the cause of the cancer ; as the irritation of a short pipe in smoking, when it attacks the lip, or a blow on the chest, when it seizes upon the male or female bosom. But although there may have been exciting causes, yet a diseased state of the blood must have preceded, because we find it frequently in other parts which are protected from injury.

The skin, the tongue, the œsophagus, the stomach, the lungs, the kidneys, the bosom, the womb, and other organs, may each or any of them be attacked with this malignant disease.

It is called malignant because its tendency is always destructive ; nor is there any instance on record in which cancer has ever shown a disposition to heal of its own accord ; and I am sorry to add that hitherto it has proved equally unyielding to the influence of medicine.

It commences with a thickening or tumour in the part, which may continue for some time without attracting much notice, but when it begins to give pain the character of the pain is distinctive—it lancinates or shoots through the tumour or part.

Treatment.—To remove it by a surgical operation is the only efficient means we can adopt, and if this be done in good time, before the lymphatic glands have become affected, it is certain to give the patient a respite for some years.

In 1834, assisted by my friend, the late Dr. Robert Bryce, of Belfast, Ireland, I removed both bosoms from a woman suffering from cancer, and only a short interval occurred between the operations, for she experienced so much relief from pain after the first operation that she entreated to have the second bosom operated on before we thought the constitution had got sufficient time to rally. And when the tumours were dissected out they were found to possess the characteristics of schirrhous, or true cancer, in the first stage.

In 1864, when on a visit in Ireland, I saw this patient in the

enjoyment of good health, and free from any return of cancer, after a lapse of thirty years.

At a more advanced period of the disease, when the tumour has ulcerated and formed an open cancer, little if any benefit can accrue from operating or removing the diseased part, because the lymphatic glands have carried the diseased matter into the blood, and the surrounding textures have become involved, so that the wound may not heal, or if it does heal, the eschar soon assumes an unhealthy action, and the disease returns.

When cancer attacks the womb similar difficulties present themselves. The disease is seldom recognized until the neighbouring parts have become implicated, so as to render an operation of little benefit, and consequently not advisable.

To alleviate pain is all that art can do under such circumstances, and anodynes in some form are indispensable; and those which do not constipate the bowels, or cause determination of blood to the brain, should be tried first.

Three grains of the extract of hyoscyamus (henbane), or three grains of extract of conium (hemlock), or one grain of the extract of cannabis Indica (Indian hemp), should be given at night to alleviate pain and induce sleep. These doses after some time require to be increased gradually up to eight or ten grains of the henbane or hemlock, and to five grains of the Indian hemp.

If these fail we must give opium, beginning with one grain of the extract of opium, or one-fourth grain of muriate of morphia in solution.

As an external application a plaster of belladonna (deadly nightshade) has a soothing effect, and is serviceable in alleviating pain.

Every means should be tried to amuse the patient, so as to prevent the necessity for anodynes during the day. And exercise in the open air, either on horseback or by carriage, has a happy effect when the weather is favourable.

The diet should be nourishing but easily digested. In alcoholic stimulants I have no confidence; in my opinion they irritate and increase disease, but if habit makes them necessary as a "creature comfort" I would not withhold them in a disease that cannot be cured by any known remedy. Attention to the state of the bowels is important, and three grains of aloes with twenty grains of Epsom salts, in treacle, should be given at night when required.

Cheerful society and change of scene, if practicable, should be courted, and they are very desirable.

The discharge from cancerous sores is always peculiarly offensive and unpleasant to the patient, and this discomfort is best removed by a diluted solution of Condyl's disinfecting fluid.

THE MUMPS.

THIS disease I take to be a species of fever, affecting the salivary glands below the ears, and the jaws on both sides. It is a contagious disease of youth, that we are liable to once only during life, and, like chicken-pox, it is of short duration, terminating favourably in from four to fourteen days, according to the severity of the case.

With the swelling considerable fever sets in, which is greatly benefited by a warm bath, and confinement to bed for a few days. Those who adopt this plan suffer little ; but others, who walk about and are exposed to cold, often cause the inflamed glands to suppurate, or have other glands affected, as the testicles of males and the bosoms of females.

Treatment.—A warm bath at 100° Fahr. for half an hour, followed by rest in bed, with sufficient covering to dispose to the surface, should commence the treatment.

No solid food should be eaten, because the motion of the jaws increases the irritation of the glands. Light gruel, or thin sago, or arrowroot, is the proper food ; and toast-, barley-, or rice-water, the suitable drink ; and if thirst annoys, ten grains of nitre should be given in such drink, every four hours during the day, to act on the kidneys ; and the bowels should be regulated by two grains of aloes and ten of Epsom salts, in syrup, every night, or alternate night, as required.

Cold applications to the swellings are not admissible. Hot fomentations with flannels wrung out of hot water are more salutary, and also more comfortable ; but many dispense with the moisture, and envelope the jaws with dry flannel.

Should neglect in the commencement cause suppuration to supervene, a poultice of bread and water or linseed meal must be applied, and the matter encouraged to come to the surface.

ERYSIPELAS, OR THE ROSE.

THIS also is a feverish disease, to which we are subject at any period from infancy to advanced old age ; and, unlike the last, it may recur any number of times.

In hospitals and crowded apartments it is known to be infectious, but with proper attention to cleanliness and ventilation it does not spread.

Erysipelas may be superficial, affecting the skin only ; or it may be deeper-seated, in the cellular substance, in which it causes suppuration.

In the superficial form it often attacks wounds after a surgical operation, or after an injury, but more frequently it results from exposure to cold, suppressing the insensible perspiration under certain states of the atmosphere, or a deranged state of the constitution generally.

It is not confined to any part of the body. We find it on all the extremities, the chest, and the abdomen ; but it is most dangerous when it attacks the face and nape of the neck.

In its habits it is very migratory, not only showing a great tendency to spread and include a larger surface, but also to change place, and remove from one part of the body to another.

It is generally ushered in by a rigor or shivering fit ; and then the skin on the part affected becomes red and slightly swollen, accompanied with tingling and itching.

Erysipelas is recognized by the superficial blood-vessels being so full, that when you press with a finger on the inflamed part the redness is renewed the moment that the finger is withdrawn.

Treatment.—A coating of flour over the inflamed part is the popular application ; but as there is generally moisture oozing from the surface, the flour becomes clotted and uncomfortable. The soft side of cotton wadding is equally soothing, more easily removed, and consequently more suitable.

Some apply cold lotions to the inflamed part ; but these may repel the inflammation, and send it in upon the internal organs ; and they are, therefore, too hazardous to be ventured on.

The best local application that I have tried is fluid diluted ammonia (hartshorn), to be applied with a feather or camel's-hair brush, over the inflamed part, every eight hours. After applying the hartshorn the part must be left uncovered for five or six minutes, until evaporation takes place, for, if covered immediately, the ammonia might blister ; but when the part is exposed to the air for a few minutes the ammonia leaves no mark, while it has great influence in allaying pain, and in thoroughly preventing itching. In the intervals between these applications of ammonia, the part should be covered with wadding in winter, and soft calico in summer.

To prevent the inflammation spreading, the solid nitrate of silver (caustic), moistened with water and applied around the outer margin of the inflamed part, has a good effect ; but in this, as in other fevers, the state of the blood must be improved before the disease can be removed.

To abate the inflammation some apply leeches to the inflamed surface, and others take blood from the arm ; but my experience obliges me to dissuade both. Leeches often add to the inflammation, and the loss of blood by the lancet frequently induces debility and retards recovery.

When the attack is mild and confined to the extremities, the patient should get half a grain of podophylline and ten grains of Epsom salts, in syrup, each night for three nights in succession, and afterwards one grain of aloes and ten of salts, at night, as required, to regulate the bowels.

The patient should also get ten grains of nitre in a wineglassful of toast-water every four hours, and three grains of the carbonate of ammonia in a sufficient quantity of toast-water, every four hours ; these to be taken alternately, so that one of them would be given every two hours, if the patient be awake ; but sleep should not be interrupted, unless it seems too protracted.

Every person suffering from erysipelas, although in a mild form, should remain in bed till perfectly recovered, because any exposure to cold aggravates the attack.

The food should be farinaceous, as ground rice, arrowroot, or sago, boiled in water, and eaten with a little milk ; and the drink should be toast-, barley-, or rice-water.

As soon as the fever abates and the tongue cleans, beef or mutton tea or chicken broth, with a little stale bread, can be allowed once a day for dinner.

When erysipelas attacks the face, the features are always greatly disfigured ; the eyelids are often so swollen that they cannot be opened, and the whole countenance is altered. In all this there is nothing to alarm, so long as the brain and throat are uninjured ; but the inflammation may also attack the throat, causing œdema or swelling of the glottis or aperture of the air-tube, and consequent death by suffocation ; or it may proceed to the membranes of the brain, proving fatal by effusion on this vital organ.

To avert either catastrophe, the feet must be kept constantly warm by a footpan with hot water, rolled in flannel to retain the heat, and by keeping the head elevated and cool ; while ten grains of

nitre and five grains of carbonate of ammonia, sufficiently diluted, are given in toast- or rice-water every three hours alternately.

Ammonia acts as an antidote against the poison of this disease, and when used internally and externally never fails to control it.

As soon as the slightest delirium or wandering occurs, the head should be shaved, and no portion of the hair retained. To this ladies have an objection, but it is not well founded, for the hair will fall after the fever, and by shaving, they will have better hair in six months than by attempting to retain the hair.

With a large quantity of hair on the head it cannot be kept cool, and even a small quantity prevents the cold applications from immediate contact with the skin, and consequently lessens their good effect, in preventing determination to the brain.

As we have stated that cold applications to external parts attacked with erysipelas are not admissible, it may seem inconsistent to advise cold applications to the head when delirium threatens. The principle is, however, very different. We withhold cold applications from the inflamed surface to prevent the inflammation from being repelled, and driven in on the brain; and we apply cold to the head to contract the blood-vessels, and lessen the inflammation of the brain, and the consequent effusion of fluid upon it. The theory is good, and the practice is supported by experience.

If the patient complains of sore throat or difficulty of swallowing, the throat should be painted with a solution of nitrate of silver (caustic), ten grains to the ounce of water; to be repeated morning and evening, till pain abates.

Quietness should be enjoined, and talking prohibited, and half a grain of podophylline, with ten grains of Epsom salts, in syrup, should be given for two or three nights in succession, while the ammonia and nitre are continued as before.

As soon as fever abates, the tongue cleans, and appetite returns, the diet should be altered to a lightly-boiled egg, with dry toast and tea for breakfast; chicken broth, beef- or mutton-tea, with stale bread, for dinner; and ground rice or arrowroot boiled in water, and eaten with milk, in the evening; and half a grain of quinine should be given after breakfast and dinner, the ammonia and nitre being taken alternately every six hours.

Solid animal food must be used with great caution till the patient is able to take exercise in the open air.

PHLEGMONOUS ERYSIPELAS.

When erysipelas attacks the cellular substance under the skin, it is called phlegmonous, because it is accompanied with a burning sensation, and generally produces suppuration. It often sets in suddenly—a thigh, leg, or arm being swollen and painful when the patient awakes in the morning, so that the attack is often attributed to the bite of some poisonous animal. Its origin is, however, similar to that of erysipelas of the skin, but its action is different. It is not so migratory in its habits, nor so dangerous as erysipelas of the throat or the membranes of the brain; but it is very painful and depressing to the constitution.

Treatment.—To unload the biliary ducts and the liver by half a grain of podophylline and ten grains of Epsom salts, given for three nights in succession, is always serviceable, five grains of carbonate of ammonia and ten of nitre being given as directed above.

The best local application that I have tried was fomentations with flannels wrung out of a warm decoction of poppyheads; and in the absence of this, bread-and-water or linseed-meal poultices, changed as often as they got cold or uncomfortably dry.

Some apply leeches to lessen the inflammation, but these are better dispensed with, unless the patient is very plethoric. A dessertspoonful of Epsom salts every morning after the podophylline has a better effect.

As soon as matter forms it should be evacuated by a free incision in a depending part, but incisions made before matter has formed often disappoint, by not being in the most favourable position; while being made too early they irritate, without benefit.

As a means of disposing to the surface in this form of attack, a warm bath at 102° Fahr. for half an hour, followed by six grains of Dover's powder, to keep up perspiration for some hours, is always beneficial, and may be repeated every day for the first three or four days with advantage.

After suppuration is established, the diet should be nourishing, but light, and one grain of quinine should be given twice a day, the ammonia being continued. Alcoholic stimulants, as ale, porter, and wine, are, in my opinion, injurious, and with ammonia and quinine, to say the least, they cannot be required.

When convalescent, shower baths, tepid at first, and cooled down gradually, prepare the patient for exposure to the open air, or for sea-bathing, which, if the season suits, is very commendable as a restorative.

MEASLES.

THIS is an infectious fever, affecting the skin and also the mucous membrane, especially that of the eyes, nostrils, throat, and air-tubes.

This disease is met with chiefly in youth, but it may occur in advanced age. It is one of those diseases to which, as a rule, we are subject once only during life; but to this, exceptions occur occasionally, and we meet with patients having measles who are reported to have suffered from it before. But as the first attack had not been seen by me in any of the cases I allude to, and as they were said to be very mild, without cough, or weakness of the eyes, it seemed possible that the special fever was also absent; and that the former disease had been more allied to rose-rash than measles.

The fever does not set in immediately after the person is exposed to contagion. The poison generally remains latent in the system from ten to fifteen days, which period is called the term of "incubation."

The first symptoms of the effects of the poison acting on the blood are a feeling of lassitude, sensation of chilliness, loss of appetite, and a rigor or shivering fit, followed by a hoarse cough, discharge from the nostrils, and weak eyes.

Most patients complain also of pain of back or head, and some of both, while the skin is hot and dry, and the pulse full and quick.

Next we notice an eruption or rash upon the forehead and face, but so little distinctive, that but for the weakness of the eyes, and tendency to cough, we could not yet recognize the disease to be measles. The eruption, however, soon extends to the chest and extremities; the small, dry vesicles coalesce; the face becomes swollen; and the peculiar purple colour of the skin declares the nature of the disease.

In some cases the eruption appears only partially, and the inexperienced fancy, therefore, that the disease is mild; but the reverse is the fact, for either a slight eruption or the sudden disappearance of the eruption is always the harbinger of evil.

Treatment.—In this and every other fever, the patient, from the first symptoms, should be confined to bed. The horizontal position does much to quiet the action of the heart, and equalize the circulation of the blood, while complete exemption from muscular exertion

places the constitution in a favourable position to contend with the disease.

A uniform temperature, suited to the nature of the case, can only be ensured in bed ; and, in measles especially, to avoid chilling draughts is necessary.

On account of the weakness of the eyes, the room should be kept darkened by a green shade to the windows ; and, owing to the irritability of the air-tubes, currents of cold air must be guarded against ; because weakness of eyes, hoarseness, or loss of voice, remaining after convalescence, is almost certain to be permanent for life.

The quantity of bed-covering should be regulated by the feelings of the patients ; just enough to keep them comfortably warm ; while the feet should be carefully attended to, and a footpan of hot water applied, if it be necessary, or bags of heated salt.

To drink freely of toast-, barley-, or rice-water, or rennet whey, or apple-tea, made by pouring hot water on raw apples, sliced, is sufficient nourishment for the first two or three days, till the cough and fever abate ; ten grains of nitre, and three grains of the carbonate of ammonia, being given in such drink, alternately, every four hours.

The popular idea is that persons when sick require to eat to be able to bear the disease, but this impression is very erroneous ; for while fever is in the system, the power of digesting food is held in abeyance, and, consequently, solid food taken into the stomach must aggravate the disease, and increase the weakness of the sufferer. It is only by fluids such as can be absorbed without being digested, that patients can be nourished during the continuance of fever.

When fever abates, the tongue cleans, and appetite begins to return, farinaceous food, as ground rice, arrowroot, sago, or maizena, boiled in water, and eaten with a little milk, is proper food ; but tea, coffee, and all alcoholic stimulants are injurious.

At the commencement of fever, it is always salutary to unload the biliary ducts, liver, and bowels. Calomel was formerly the medicine for this purpose, but podophylline does the same service, and is a safer remedy. Half a grain of the latter, with ten grains of Epsom salts, in syrup or pills, taken every night, for two nights in succession, is sufficient ; the bowels being afterwards regulated by two grains of aloes and ten of Epsom salts, given as often as required. But as the fever subsides, diarrhoea generally sets in, and renders aperients unnecessary.

In mild cases, with proper care, the nitre and carbonate of ammonia, in which I place great confidence, are all the medicine that is required, except for the bowels. For children, the acetate of ammonia does equally well, and it is more palatable. It is made by dropping the carbonate of ammonia into a two-ounce bottle of table vinegar, until effervescence ceases, when the bottle should be corked for use, and a teaspoonful should be given in place of the carbonate to a child of twelve years, and half that quantity to one of six years.

But if the cough be troublesome, six grains of Dover's powder should be given in a little syrup, at night, to a male adult, five grains to a female, and less in proportion to age ; one grain being sufficient for a child of two years. And if pain of chest be present, a mustard plaster should be applied, kept on till the skin is red, and repeated evening and morning till pain is relieved.

After fevers causing an eruption on the surface, the cuticle or scarf skin exfoliates, and the true skin, in which so many nervous fibrils terminate, is denuded of its wonted covering. Getting out of bed too soon, or any chill, is therefore calculated, owing to sympathy with the skin, to increase the irritability of the air-tubes, and cause determination also to the lungs, which may destroy life.

A week after the eruption disappears is soon enough for the patient to get up ; and during that week the diet should be altered to a lightly-boiled egg, with a cup of tea and dry toast for breakfast ; chicken broth, beef or mutton tea, with stale bread, for dinner ; and ground rice or maizena, boiled in water, and eaten with milk, in the evening.

When the patient gets out of bed, solid animal food can be returned to, taking care that it be light and easily digested at first, and only in moderate quantity ; and half a grain of quinine should now be taken after breakfast and dinner, unless it causes headache, and if so, a wineglassful of infusion of chiretta or quassia should be substituted for it.

To prepare the patient for exposure to the open air, a tepid shower bath should be taken every morning, and cooled down gradually to a cold bath.

SCARLET FEVER, OR SCARLATINA.

THIS is another very infectious fever, causing an eruption on the skin, and ulcers in the throat.

Some wish to limit the term scarlatina to the severe forms of the disease, but as this and scarlet fever are generally considered synonymous, we shall take them as being so.

This disease, like measles, occurs generally only once during life, but there are exceptions to this rule, and it is noticed that second attacks are mild.

The poison of scarlatina is exceedingly virulent, and it is impossible to say at what stage it may cease to be contagious. An instance occurred in the circle of my own acquaintance, in which the trunk of a medical student who died in Edinburgh, which contained part of his dress that had never been worn by him during his fever, communicated scarlatina to a family in Ireland, although the clothes were freely exposed to the open air before they were worn, and might be supposed to have been purified by the sea voyage.

A high temperature, I believe, is the only certain means of destroying the contagion that lurks in apparel of any kind, especially of the woollen fabric. It should be steamed in an oven heated to 220° Fahr. for two hours, and this does not singe or injure the material.

Scarlatina appears in three forms: the first, or mildest, affecting the skin with slight rash, and merely a blush on the fauces, or throat; the second, more severe, affecting the skin, and with slight ulcers in the throat; and the third, called malignant, in which the throat is deeply ulcerated.

The most suddenly fatal cases under my care were those in which the disease commenced with inflammation of the membranes of the brain, and violent delirium, in which the dose of the poison seemed to be so great that the constitution was overpowered, and could not rally.

The first symptoms of the disease are a sensation of chilliness, amounting in some cases to a rigor or shivering, accompanied with nausea, irritability of temper, and depression of spirits.

The eruption on the forehead and face appears earlier than in measles—about the second day; and it is distinguished from measles by being less florid in colour.

In scarlet fever, also, the eyes are not weak, nor have we the hoarse cough as in measles, while the throat is always more or less affected, the tonsils being generally ulcerated at an early period.

Treatment.—In the treatment of this and every other fever, the first thing to be done is to put the patient to bed, for the reasons given in the article on measles. And as the cuticle exfoliates very largely in this fever, the patient should remain in bed until the cuticle is tolerably restored, which will be two weeks after the eruption disappears from the surface.

Those who are exposed to changes of temperature earlier than that are always subject to anasarca (dropsy of the cellular membrane), or else to fatal dropsy of the chest.

Most of the unfavourable recoveries in my practice were from cases so mild that parents could not be persuaded to confine their children to bed a sufficient length of time to allow the cuticle to grow again, or the poison of the fever to be perfectly eliminated from the constitution. And to the same cause, together with the use of solid animal food before the stomach is in a fit state to receive it, may be attributed the relapses and bad consequences resulting from fevers.

In mild attacks, having given half a grain of podophylline with ten grains of Epsom salts, to carry off the bile, the bowels should be regulated afterwards with two grains of aloes and ten of salts given in treacle, at night, when required. The patient should be confined to bed in a well-aired room, with covering sufficient to retain warmth; and get toast-, barley-, or rice-water, or rennet whey, with five grains of nitre, and half a teaspoonful of the acetate of ammonia, in such drink, every three hours, alternately, if the patient be below ten years; and ten grains of nitre, and one teaspoonful of the acetate of ammonia, every three hours, alternately, if above ten years of age.

In severe cases, when the throat is ulcerated, in addition to the nitre and ammonia, the carbonate of which is preferable, being given in two- to five-grain doses, sufficiently diluted, the ulcers in the throat should be brushed with a solution of nitrate of silver, ten grains to the ounce of water, applied by a large camel's-hair pencil night and morning; and if the salivary glands below the jaw become enlarged and painful, they should be covered with a plaster of iodide-of-lead ointment (two drachms of the iodide to the ounce of rendered suet), spread on soft leather, and supported by a narrow ribbon or tape over the head.

Toast-, barley-, or rice-water, or rennet whey, is sufficient nourish-

ment for the first three or four days ; but after that the patient requires to be supported with chicken broth, beef- or mutton-tea, given once or twice a day, the former drink being continued, together with the nitre and ammonia, which latter acts as an antidote to the poison of scarlatina.

When the throat is much affected the fever is always higher, and determination to the brain is apt to supervene. As soon as heat of head or delirium indicates this, the hair should at once be shaved off entirely. Any attempt to retain it is futile, as it must fall after the fever, and its presence imperils life.

After being shaved the head should be elevated a little, and kept constantly cool by rags wet with cold water often renewed, or by ice in a bladder or oiled silk. The feet should be carefully attended to, and kept warm by a footpan of hot water rolled in flannel ; and care must be taken that the bladder and bowels be emptied at proper intervals—the bladder every six hours, and the bowels once in twenty-four hours. Sponging the patient frequently with tepid water is very serviceable.

In the malignant form, when the throat is deeply ulcerated, and of a livid hue, with little appearance of eruption on the skin, the solution of the nitrate of silver should be stronger (thirty grains to the ounce of water), to be applied by a camel's-hair brush to the throat, night and morning ; and before applying the caustic the discharge on the ulcers and throat should be carefully cleaned off by a piece of sponge or soft rag.

In severe cases, when the brain suffers, some apply leeches, others take blood from the arm, and a few blister. From two to six leeches applied behind or below the ears, on each side, relieve the head symptoms, and are serviceable ; but the lancet and blisters I would dissuade, having never been convinced of their benefit.

The prostration of strength in this form of the disease is always alarming, and should be counteracted by nourishing drinks or fluid food, as beef-tea, mutton-tea, chicken well bruised and boiled in vacuo, in a bottle without water and well corked ; and Liebig's essence of meat. One of these should be given every three hours ; with five grains of the carbonate of ammonia for an adult, and two grains for a child.

Stimulants, as wine and brandy, are preferred by many ; but they are far inferior to the ammonia, which has a specific effect in counteracting the poison of this fever.

The amount of poison in the system seems, however, so great in

many cases that it must prove fatal in despite of remedies ; and none but the best constitutions can recover from the malignant form of this fever, which often destroys life on the third or fourth day.

The longer the patient holds out after that, our hopes of recovery increase ; and after the ninth day we may calculate on convalescence.

The consequences of this fever are always to be dreaded, and too much care cannot be taken.

The inflammation often extends from the throat to the ear by the internal passage behind the tonsils, and causes inflammation of the drum of the ear, which is destroyed, and with it the power of hearing.

An ichorous discharge from the nostrils also irritates the upper lip, and the eyelids suffer from discharge from the eyes, while the lips and mucous membrane of the mouth are often excoriated. To improve these a saturated solution of borax (as much as water will dissolve) applied by a camel's-hair brush to the excoriated parts, and injected into the ear by a small syringe, is efficient.

Tonics in some form are always necessary for patients recovering from scarlatina. For children, the solution of the perchloride of iron (five drops in a wineglassful of sugar and water), after breakfast and dinner, generally suits well ; and ten or twenty drops would be the dose for adults with whom quinine disagrees. But for the latter quinine is preferable unless it gives headache, which is seldom produced by half-grain doses, thrice a day after food.

The food should be light and easily digested, commencing with roast pullet or white fish ; then the lean of good beef or mutton, with stale bread or a mealy potato ; care being taken not to overload the stomach, than which nothing is more certain to retard recovery.

As soon as the cuticle is restored, and the patient has got new boots and gloves (for the old scarf-skin is frequently cast off like a slipper or old glove), if the weather be fine and the strength sufficient, to drive out in the open air is salutary ; but an attempt to walk must not be made too hastily.

A shower bath, tepid at first and cooled down gradually, is the best means of preparing the patient for exposure to the open air and for change, which is very desirable ; the sea coast being preferable, if the season be suitable. But sea-bathing should not be commenced sooner than a month after the eruption disappears. Up to that period the shower bath or sponging, followed by friction, is much safer, and equally beneficial.

Some never recover perfectly after a severe attack of any fever; while others, formerly delicate, become stout, and seem to get a new constitution; their nervous irritability, which formerly made them too susceptible of both internal and external impressions, being reduced by the poison of the fever.

To prevent the spreading of this virulent fever is very important, and should be studiously attended to.

Because belladonna, when taken into the stomach, produces, by sympathy, a rash on the skin, Hahnemann, the homœopathist, on his principle of like curing like, proclaimed belladonna a prophylactic for this fever, or a medicine which, if taken by persons exposed to the disease, would render them proof against its contagion.

After many trials of this remedy, and much attention to its effects when given by others, I am obliged to say that I place no confidence in it for this purpose. Indeed it seems equally consistent to imagine that diseased fish or bad mushrooms, which, when eaten, produce a rash on the skin, should be a preventive for this fever.

Free ventilation in the sick apartment, perfect attention to cleanliness, and care not to inhale the breath or vapour from the patient, are the surest means of escaping contagion.

The use of Condyl's Disinfecting Fluid is also highly commendable, as it destroys unpleasant perfumes arising from perspiration or otherwise; but it should not be allowed to supersede attention to cleanliness, which must include not only frequent changes of linen, but also the immediate removal of the patient's dejections and urine, which are always offensive, and, no doubt, calculated to spread the contagion.

CHICKEN POX.

This is another eruptive fever, which is also infectious, but of a very mild character. Like the last-mentioned fevers, it attacks persons once only during life, and is a disease of youth.

The premonitory symptoms are very slight, the eruption being preceded by little fever or derangement of the general health. Children may be less disposed to play than usual, but their appetite is scarcely impaired, nor do they complain of pain or suffering; while youths at school or public offices are first made aware of something being amiss with the constitution, by a crop of small pustules appearing on the shoulders and chest.

This eruption is sometimes mistaken for modified small-pox, with which it has no affinity; nor does the one give any protection against

an attack of the other. The preference of locality in each is also well marked.

Small-pox commences on the forehead and the face, which it furrows badly.

Chicken-pox, on the contrary, spares the face, and begins on the shoulder and chest; but it appears abundantly on the hairy scalp. It affects also the mucous membrane of the mouth, causing pustules on the palate and throat.

The vesicles formed by this disease do not suppurate, as in small-pox. They soon dry up, and in about a week exfoliation takes place, and the eruption goes off without leaving any trace of its former presence.

The most distinctive test is, however, obtained by inoculation. The fluid taken from the vesicle of modified small-pox readily communicates the disease to another person inoculated with it; but chicken-pox cannot be propagated in this way.

Treatment.—This disease requires little medicine. The general rule of confinement to bed in fever cannot be dispensed with; nor should we neglect to unload the liver and bowels. A youth should get half a grain of podophylline and ten grains of Epsom salts, in syrup, at night, the bowels being regulated afterwards by two grains of aloes and ten of Epsom salts, taken at night, as required. Half of these doses would be sufficient for a child of six years.

The food should be rice, arrowroot, or maizena, boiled in water and made palatable with milk; and the drink should be toast-, barley-, or rice-water, with ten grains of cream of tartar given in each drink.

After the fourth day chicken broth or beef- or mutton-tea, with stale bread, may be given once a day for children; but while confined to bed, children do not require animal food in any form, and solid animal food is injurious, until they can take exercise with it.

In this and every other cutaneous disease exposure to cold or chills should be avoided, and sufficient clothing ought to be worn for some time after recovery.

INFLAMMATORY FEVER.

This disease is commonly called fever from cold, and results from chills or interruption to the insensible perspiration, the constitution having previously been in an inflammatory state.

It sets in with a sensation of chilliness, accompanied with muscular pains of the legs, and followed by a rigor or shivering fit.

It is not infectious, and by proper means it may be cut short; but if neglected it is certain to terminate in the inflammation, and perhaps destruction, of some vital part; the determination to which will depend on the peculiar constitutional bias of the patient.

It is a familiar adage that every man has his weak point; and in the practice of medicine we find this observation applicable to every constitution. Hence on exposure to cold or wet, the glands of the throat are attacked with some, causing quinsy; with others the air-tubes suffer, inducing bronchitis; while the same cause, in another constitution, will excite inflammation of the pleura (pleurisy), or congestion and inflammation of the lungs, called pneumonia; and if the stomach or bowels be the weak point, we may have gastric fever or dysentery.

Treatment.—To avert such inflammation we must not wait till the part is attacked; we must anticipate the attack; and immediately after the shivering fit give a hot bath at 102° for twenty minutes or an hour, unless faintness supervenes. On removal from the bath, the body being well dried, the patient should lie between blankets, and if an adult, he should get ten grains of Dover's powder, in syrup, and less in proportion to age. No drink should be taken for two hours after the powder, lest the stomach should reject the medicine; and then the patient should drink freely of warm toast- or rice-water, to encourage perspiration, which should be kept up by an additional blanket, for ten or twelve hours. The damp blankets should then be replaced with well-aired sheets, and the patient should get half a grain of podophylline and ten grains of Epsom salts, in syrup, every eight hours, till the bowels act freely. This dose of podophylline and salts should be repeated every night for three nights in succession. The patient should remain in bed. The food should be ground rice, arrowroot, or maizena, boiled in water, and eaten with a little milk, if the patient have an appetite; but if the tongue be coated and appetite wanting, no food should be taken until the tongue cleans; but the patient should drink toast-, barley-, or rice-water, with ten grains of nitre in each drink, to check feverishness and make the kidneys act.

If after the bath and perspiration acute pain is felt in any part, a mustard plaster should be applied over the seat of pain, kept on till the skin is perfectly red—say half an hour—and repeated every eight hours till it abates. But if a third mustard plaster does not remove

the pain, from four to twelve leeches, according to the strength of the patient, should be applied; taking care to have the mustard well washed off, and the surface smeared with fresh cream to make leeches sit. The bleeding from the leech-bites should be encouraged by fomenting with flannel wrung out of hot water, and when bleeding stops, the mustard plaster should be reapplied and repeated as before, till pain disappears; but the bites should be covered with a little bit of rag cut round, to protect against the mustard.

If the fever and inflammation have been checked by the bath and perspiration, as generally happens, the great difficulty to contend with is the anxiety of the patient to get out of bed, which desire, if indulged, is sure to renew the fever, and cause it to make its own terms. But if the patient can be persuaded to remain in bed, abstain from animal food and all stimulants, and keep the bowels acting by two grains of aloes and ten grains of salts, taken at night, when required, he may be well in a week.

When the reverse of this occurs, and the liver or lungs are affected, suppuration may ensue, and we get that species of fever called hectic, which requires the constitution to be supported by light nourishing diet, and to be aided by two grains of the iodide of potassium, taken in a wineglassful of toast-water, after food, thrice a day, to excite the absorbents to remove the matter. Recovery in such cases is at best always tardy, and needs to be aided by blisters often repeated, or by some external drain, near the affected part.

AGUE, OR INTERMITTENT FEVER.

This disease is not infectious, and is produced by a peculiar poison arising from marshy soil, called miasmata or malaria.

The nature of this poison has yet to be ascertained, for hitherto chemical examinations have failed to discover in the air of marshy districts any marked deviation from the composition of the common air of healthy districts.

Some attribute this poison to the exhalation given off by decomposed animal or vegetable matter; but the vapour from the ground has proved to be equally noxious where the soil was dry and gravelly, without any appearance of vegetation, as it was in other places where herbage was abundant. Nor does the belief that it proceeds from the decomposition of animal matter seem to be well founded, because in Australia large numbers of sheep and cattle are constantly being boiled down to obtain their tallow, and the effluvia from such

establishments, under a vertical sun, is exceedingly overcoming; yet I have not known or heard of intermittent fever being caused by this effluvium. And we know that hundreds of cattle often die in the same district, during severe droughts, and decompose on the surface of the ground, without causing fever either to travellers or the inhabitants.

That the malaria of ague is absorbed by water, and capable of being communicated to human beings in that form, is ascertained by the fact that persons have got intermittent fever by using water brought from a marshy district.

It is also known that this poison is conveyed by moisture in the atmosphere; and hence it is found to be doubly dangerous to travel at night or early in the morning through marshy districts.

Another peculiarity is worthy of notice. The poison gravitates towards the earth, and does not rise high, unless it be driven by the wind from a marsh against a hill, which it may ascend, and affect persons on the summit, or in the valley on the opposite side.

Those travelling or residing in a marshy district should be careful not to sleep on a ground floor, because the more elevated the apartment the protection from malaria is the greater. It is noticed also that a hedge or trees intercept the poison; and persons having a hedge between them and the marsh escape, while those on the other side of the hedge suffer from intermittent fever or ague.

Tillage or agriculture, by exposing the soil to the rays of the sun, has a marked effect in preventing malaria. In many parts of Australia, when first occupied, intermittent fever was prevalent, but disappeared when the soil was partially cultivated.

Malaria is found also to affect strangers more readily than the old inhabitants of a district. Nor can this exemption be attributed to such protection as is experienced from an attack of measles or scarlatina. On the contrary, one attack of ague seems only to render the constitution the more susceptible of another. It must be ascribed to the influence of habit steeling the system, as persons can be trained to take large doses of poison; and doctors, by habit, become less susceptible of fever than others less frequently exposed to it.

It is also certain that the poison may remain dormant in the system for a considerable time. I have attended patients in Sydney who had not been in a malarious district for six months previous to their attack, and must have retained the poison in their system during that time.

Ague assumes three forms, in different constitutions. Some patients have an attack every day, constituting the quotidian form ; others are attacked every second day, and then it is called the tertian form ; while others have an intermission of two entire days, when it is termed a quartan ague, or third-day fever.

In quotidian ague, the attack comes on in the morning ; in the tertian, about noon ; and in the quartan, in the evening ; and the more frequent the attacks, they are the worse and continue the longer.

The quotidian occupies the whole day, the tertian four hours only, and the quartan about two or three hours.

The fever also consists of three stages—the cold, the hot, and the sweating stages ; and after the fever has thus exhausted itself, the patient feels quite well, and can enjoy himself till the approach of the next attack.

With some the attack is indicated by a feeling of chilliness, or of cold water being poured down one's back ; while the features are contracted, and the skin shrivelled. With others the rigor, or shivering, supervenes suddenly, without previous warning ; and in either case the trembling is so great that, not only does the bed shake under the patient, but the room shakes also.

During the rigor the blood seems to desert the surface, and to be accumulated in the internal organs. Of these the spleen suffers most, so that after a continuance of ague it becomes very much enlarged, causing what is called the "Ague Cake."

Treatment.—As the duration of the rigor regulates the severity of the attack, the great object is to obtain some means by which the rigor can be cut short or prevented.

A hot bath, at 102° Fahr., raised gradually to 104°, given shortly before the attack and continued for an hour, unless faintness forbids, has succeeded in some cases in preventing the attack, and never fails to mitigate the rigor. When leaving the bath, the patient should be speedily dried, and laid between blankets. He should take ten grains of Dover's powder in syrup, and two hours afterwards drink freely of warm toast-water, to encourage perspiration, which should be kept up for ten or twelve hours, when the moist blankets should be replaced with well-aired sheets. And the liver and bowels should be unloaded by half a grain of podophylline and ten of Epsom salts each evening.

If the ague be a quotidian the patient should remain in bed, and have the hot bath and the Dover's powder repeated for three days in

succession ; but if it be a tertian or quartan ague, the hot bath and Dover's powder should be given as directed above, shortly before the hour of attack, three times in succession, the patient being allowed to walk about in the intervals.

But in these days of telegraphic dispatch and railway speed these slow means meet with little favour, and seem too troublesome to be tried.

Thanks to chemistry, we have a specific—quinine, in such convenient bulk, that by a single dose we can generally cut short and prevent an attack of ague.

To obtain the benefit of this medicine the stomach and bowels must be prepared for it, by half a grain of podophylline and ten of Epsom salts, given in syrup at night ; and if it does not act, half an ounce of Epsom salts next morning ; or, if podophylline be not convenient, five grains of calomel and two of aloes in pill or syrup at night, and half an ounce of the salts next morning.

The bile being thus evacuated from the system, ten grains of quinine should be given in syrup shortly (about half an hour) before the expected attack, the patient lying in bed, with his head tolerably elevated. One hour after the quinine is taken, the patient should drink warm toast- or rice-water, to encourage perspiration, which should be kept up for three or four hours ; after which the patient may dress and walk about.

This dose of ten grains of quinine should be repeated half an hour before the expected attack, whether it be daily, every second, or third day, for three times in succession ; after which one grain of quinine should be taken after breakfast and dinner, for one or two weeks, to prevent a relapse.

The food should be light and easily digested, avoiding cheese-pastry, and made dishes ; and alcoholic drinks and tobacco are injurious.

Some order three or four grains of quinine twice a day during the intermissions, and no increased dose before the hour of attack ; but I found the medicine more certain and serviceable when given in full dose before the attack, and one grain twice a day in the intervals. But the bowels should be kept acting by two grains of aloes and ten grains of Epsom salts, in syrup, at night, as required.

From idiosyncrasy of constitution, quinine does occasionally fail to cure ague ; and if it does, arsenic is the next best medicine. It must be given during the intermissions, beginning with five drops of Fowler's solution of arsenic, in a wineglassful of water, shortly

after food, three times a day. And this dose is to be increased by one drop every day till twenty drops are taken thrice a day, or until it causes dimness of sight, swelling of the face, faltering speech, or giddiness of head. When any of these symptoms appear, the arsenic must be discontinued for a few days, and commenced again in doses of five drops, to be increased by one drop every day up to the number at which the patient left off before, which is full dose for that constitution, and must not be exceeded.

If the ague has ceased to attack, when the patient has taken ten, or any number of drops, the dose may then be reduced to five drops, as at first, and continued, without increasing, for two weeks, to prevent a relapse.

These are the doses for a male adult. The disease is so rare in females that I have not met with a case, owing, perhaps, to their being less exposed to its causes. Nor have I seen children affected with ague, my experience being limited to cities or towns, where it seldom prevails to any great extent.

The price of quinine is often an object to the poor, and arsenic, being cheap, suits their means.

In some cases, therefore, I have given five grains of quinine, three times in succession, before the attack, as above ; and five drops of Fowler's solution of arsenic, three times a day, shortly after food, during the intermissions, which was sufficient to cure the ague ; and a continuance of five-drop doses, thrice a day for two weeks, prevented any return of the fever.

Charcoal, taken in ten-grain doses thrice a day, is reported to have cured ague. And cobweb, made by black spiders, is also said to have cured it, when taken in ten-grain doses twice or thrice a day ; but of these I have had no experience.

REMITTENT FEVER.

This disease is peculiar to marshy countries, especially in hot climates. It varies considerably in its type in different latitudes : hence, in England it is called bilious fever ; in New Orleans, yellow fever ; and in Jamaica it is termed black vomit and yellow fever. And the origin of this fever has always been attributed to malaria, such as causes intermittent fever.

Remittent fever is marked also by three stages, like ague ; but none of these is so distinct as occurs in intermittent fever. Every evening there is chilliness, followed by heat, and afterwards by

perspiration, which subsides towards morning, leaving the patient so weak, depressed in spirits, and so giddy, that he cannot sit up. And it differs from ague, in affecting females as well as males.

When travelling as an invalid from Australia to England, in 1854, I sailed in "The Golden Age," an American steamer, and as she was a fine vessel, about a hundred passengers availed themselves of the opportunity to make the voyage by that route. We called at Tahiti to coal, and after the pleasure of seeing that island, with its cocoanuts and tropical fruits, we arrived at Panama, all in good health, and improved by the voyage.

The railway at that time was made only half-way across the Isthmus, to a village called Obispo, to which we and our luggage had to be carried by mules, the arrangement for which detained us two days in Panama.

We spent the night at Obispo, and the next morning proceeded by train to Aspinwall on the eastern coast, and on the following morning we were taken on board of the "Dee," one of her Majesty's steamers that carried the mails from the different West India islands to St. Thomas, to be conveyed by the "Magdalena" to Southampton.

The "Dee" was a very nice, comfortable boat, and after five days sailing we arrived at St. Thomas in perfect health.

The "Magdalena" had not made her appearance, so we went ashore for the day, and in the evening got on board that boat, which we found to be a large, uncomfortable vessel, and very much crowded, as we added about a hundred to her usual number of passengers.

The cabins on the upper deck were tolerably comfortable, but the saloon was between decks, and the cabins off it were suffocating when the ports were closed every night.

No remarkable incident occurred for four days after we left St. Thomas, but on the morning of the fifth day the captain sent a steward to request me to see the doctor of the ship, who was so unwell that he could not visit two patients that were ill. I found the doctor a robust young man, who was making his first trip in the "Magdalena," having engaged lately at Southampton, and he had not been on shore at St. Thomas.

On inquiry, it appeared evident he had got fever, and when I told him so he smiled, saying it was not likely that he, who had been three years house-surgeon to a fever hospital in Dublin without being infected, should get fever from the open sea air. I then asked

to see his two patients before prescribing for him, and I found these two firemen having exactly the same symptoms and fever as the doctor had got.

The fever assumed the remittent character, but it was evidently ship fever, influenced by the latitude we had lately sailed in. The first night I slept in the "Magdalena" I was convinced by the effluvia from the mattress and pillow, that a fever patient had occupied the same bed lately; but never having had fever although much exposed to it, I had no fear of contagion.

The disease soon spread through the ship, and in four days we had about forty patients suffering from fever. On the fourth day the doctor was able to sit up, and had no relapse; but dysentery attacked one of the firemen, and proved fatal on the fifth day, when I also was seized with fever.

It was then discovered that a gentleman from St. Kitts was a medical practitioner, and he was pressed into the service. He, I believe, agreed with the captain in thinking it Panama fever, and from his experience in St. Kitts, he no doubt treated it well; but the crowded, badly-ventilated ship gave patients little chance to recover, and during the next five days fifteen persons were consigned to a watery grave.

The morning after I was taken ill the young gentleman that occupied the cabin with me felt giddy while dressing, and fell on the floor, chilled and feverish. As I prescribed for myself, he requested I would prescribe for him: and having arrived at Southampton four days afterwards, he was able to proceed to London, attend the theatre that night, and sup at a tavern. He got a relapse, however, and was confined to bed for three weeks afterwards.

The prominent symptoms of this fever were either giddiness or slight headache, with quick but not full pulse, nausea, loss of appetite, and depression of spirits during the day; followed by chilliness in the evening, then heat and restlessness, terminating in perspiration towards morning.

When nausea and a coated tongue indicated a loaded stomach I found a mild emetic serviceable, especially when followed by five grains of calomel and a scruple of compound powder of jalap. But if the tongue was little coated, the emetic was dispensed with.

During the nightly exacerbations ten grains of nitre in hot toast-water while the chill continued, and in cold toast-water in the hot stage, as often as the patient wished to drink, were allowed; and during the day small doses of quinine, half a grain or one grain,

twice a day, had a good effect, but large doses of quinine increased the delirium, and aggravated the symptoms.

Those who followed this plan, and remained in bed, suffered little; but some who would not deny themselves their usual beverage of brandy-and-water, nor be confined to bed, if they did not die on board the "Magdalena," had tedious fevers after they arrived in England.

One peculiarity distinguished this fever from any other I have seen. All who had it severely, got a pustular eruption on the forehead and face, similar to mild small-pox, but leaving no mark; nor were the relapses that occurred in England accompanied with the eruption.

COMMON CONTINUED FEVER.

This disease may be caused by overloading the stomach with indigestible food, by over fatigue, or by exposure to the heat of the sun. When the stomach is the part most affected, it is called gastric fever; when there is much determination to the head, it is termed brain fever; and when the air-tubes suffer, it is styled bronchial fever, or popularly chest fever.

The premonitory symptoms of this fever are lassitude, pains in the back and legs, accelerated pulse, coated tongue, and general shivering. The tongue soon becomes dry, the bowels are confined, thirst is frequent, and headache severe.

Simple continued fever, when properly treated, generally terminates favourably in about a week, by an abundant perspiration, or critical diarrhoea. But if it be mismanaged, there may be great determination to the brain, followed by violent delirium and death.

Treatment.—In this, as in every other fever, the heart labours, and as the horizontal position does much to equalize the circulation of the blood, and quiet the action of the heart, confinement to bed from the first must be insisted on as absolutely necessary.

If there be evidence of an overloaded stomach, twenty grains of ipecacuan, in a cupful of water, taken in three parts, with an interval of ten minutes, are generally sufficient to act as an emetic; but should it fail to do so, the throat should be tickled with a feather, and vomiting encouraged by tepid water.

An hour after the emetic an adult should get half a grain of podophylline, with ten grains of salts, or if this be not convenient, five grains of calomel, with two of aloes, in treacle or syrup, either to be

followed by half an ounce of salts, if the bowels do not act in eight hours.

The drink should be toast-, barley-, or rice-water, with ten grains of nitre in such drink, every three hours; but tea, coffee, and all stimulants are injurious, and must be withheld.

Food of any kind cannot be digested, and should not be given till the tongue cleans and appetite returns, which is seldom before the fourth day, and until then, drink as above is sufficient nourishment. Afterwards ground rice, arrowroot, or maizena boiled in water, and eaten with a little milk, may be allowed; the nitre being continued, and the bowels regulated by two grains of aloes and ten of salts, in syrup or pill, at night when required.

If the head becomes hot and delirium threatens, the hair should immediately be shaven, the head moderately elevated, and kept cool by damp cloths, often renewed, or by ice in a bladder.

If the stomach or chest be pained, mustard plasters should be applied over the seat of pain, kept on till the skin is perfectly red, and repeated every eight hours till pain abates; and no animal food should be given in any form till fever subsides.

If a third mustard plaster is not sufficient to remove pain of stomach or chest, then four to twelve leeches, according to the patient's strength, should be applied over the seat of pain, taking care to have the mustard well washed off, and the surface smeared with fresh cream to make the leeches sit. Bleeding should be encouraged by fomenting with warm water, and when it ceases the mustard plasters should be reapplied and repeated as before.

When fever subsides, chicken broth, beef- or mutton-tea, may be given, with stale bread, once a day for dinner; and if this be borne well, a lightly-boiled egg, with tea and dry toast, may be given for breakfast, and a little roast fowl or lean of meat for dinner, to prepare the patient for getting out of bed.

TYPHUS FEVER.

This is a very contagious fever, originating from some atmospherical poison affecting the system. It and other contagious fevers have been styled blood fevers, because the blood seems to be contaminated by the poison that causes the fever. This distinction does not seem a very accurate means of discriminating, as the blood is certainly more or less poisoned in all fevers.

Typhus is popularly known as the fourteen days' fever, because a

change for the better or worse occurs about that period. It generally accompanies famine, and is associated with poverty, filth, and destitution. It is often epidemic, attacking all ages, from two or three years upwards, but I have not seen an infant affected by it.

When in charge of a dispensary in the north of Ireland, in 1837, I frequently had six or seven patients in the same house, all huddled together on the same pallet of straw, with very little covering; and in one instance I lifted a baby that was trying to get nourishment from the cold bosom of its parent, who had died during the previous night.

The Irish, who are naturally kind-hearted and sympathising with those who suffer, have such a dread of the "faver," that no one could be induced to nurse this poor widow and her five children, the father having died of fever six months previously. Nor could I persuade any of the neighbours to take the infant, about three months old, until I stripped off all the rags that covered it, assuring them that the infection was all in the clothes, which fortunately happened so, as the baby did well, and the good woman who took the infant escaped the fever.

During my practice in Australia I never saw a case of typhus fever. The working classes are not much crowded together, and are better fed, while the climate seems unfavourable for this form of fever.

The infection or contagion of this fever seems, in some cases, to strike immediately. When a person had assisted to put the body of a typhus patient into the coffin, although he had not been exposed to the contagion previously, yet it was not unusual for him to be attacked next day. In other instances a fortnight would elapse before the person exposed to contagion would be attacked, the interval being called the "incubation."

In my experience, the cases that were affected soonest after exposure to the contagion were the most severe, and the most certain to prove fatal.

When taken with typhus the patient feels nausea, loss of appetite, thirst, languor, and headache, which are soon followed by a dry, hot skin, dry tongue, rapid pulse, and prostration of strength.

Treatment.—The general rule, requiring the horizontal position for fever patients, is especially necessary in this fever, and some, neglecting this rule, have walked into their coffins. A young man who was apprenticed to a blacksmith, had been at work all the week and was brought to my dispensary in 1837, on a Sabbath morning,

which was evidently the second week of his fever, for the eruption was out, and it does not appear till the second week. I gave him medicine of a strengthening kind, and directed him to go to bed when he returned, and not to leave it till he recovered. When I went to visit him next morning, I learned that he died before he reached his master's house.

Any muscular exertion, even getting out of bed for any purpose, during the continuance of this fever, is calculated to do much injury, and has often given a fatal tendency to an attack, the symptoms of which were formerly favourable.

This, and other contagious fevers, as measles, hooping-cough, scarlatina, typhoid fever, and small-pox, cannot be cut short, but by proper care they can be very much mitigated in their severity, and vital organs which are attacked can be relieved.

Large doses of quinine, given every two hours, have been reported to have cut short this fever ; and a cold shower bath, while the skin was hot, has got similar credit. But my experience does not enable me to place confidence in them, or to recommend them.

While the skin is dry and hot, sponging the body, especially the face and the extremities, frequently, with tepid water, is very grateful to the patient, and more generally serviceable than the shower bath, while it is perfectly safe.

The treatment in which I place most confidence consists of half a grain of podophylline, with ten grains of Epsom salts, or, if preferred, five grains of calomel and two of aloes, in syrup, either to be followed by half an ounce of salts, if the bowels do not act in eight hours, so as to carry the bile out of the system, together with twenty drops of diluted sulphuric acid, in a teacupful of the usual drink, toast-, barley-, or rice-water, or rennet whey, taken through a glass tube, or from a cup with a long beak, to protect the teeth. The sulphuric acid is necessary to correct the thirst, and lessen the tendency to putrescency of the fluids.

These drinks, taken as often as wished for, are sufficient nourishment for the first four days ; the bowels, meanwhile, being regulated by two grains of aloes and ten of Epsom salts, taken in syrup, each night, or when required.

After the mulberry eruption, which is characteristic of this fever, appears about the end of the first week, the patient should be supported by a cupful of beef- or mutton-tea, or Liebig's essence of meat, given every six hours, with half a grain of quinine, in a little syrup, given before or after each cupful of beef-tea or Liebig's essence.

As tea and coffee excite the system, they are not admissible in fever; but the sulphuric acid, in toast- or barley-water, cannot be dispensed with while the fever continues.

After the mulberry eruption appears on the abdomen and on the body, the fever increases, and is usually severe in proportion to the amount of the eruption on the surface.

The brain is always affected to some extent, and the head should be shaved early, that it may be kept cool by damp rags often replaced, or by ice in a bladder, or bag of oiled silk.

When the patient begins to wander or be delirious, the hearing is always affected, being sometimes painfully acute, or else deafness sets in, which is much more favourable. When the delirium made the patient restless at night, I have found ten grains of Dover's powder given in a little syrup to a male adult, and less in proportion to age, of great service in composing, if the head was kept cool and moderately elevated, and the feet and legs constantly warm. But as patients often sleep into eternity, it is not advisable to repeat the opiate.

At this stage of fever, when delirium prevails, the patient becomes perfectly regardless of his wants or of the calls of nature, and it is an important duty on the part of his attendants to see that the bladder is relieved every six hours, and the bowels once in twenty-four hours; while great regularity in giving nourishing drinks is absolutely necessary.

If the urine is allowed to remain in the bladder till it becomes too much distended, the bladder loses the power of contracting to expel the urine. After this period the urine, as it is formed, trickles off in drops, and an inexperienced nurse, seeing the sheets wet, may fancy that the bladder is relieved, while it is distended to the point of bursting, and an additional poison is being added to the poison of the fever, by the urea, or poisonous portion of the urine in the bladder, being absorbed into the blood.

The bladder in such cases is often elevated above the bones, even as high as the umbilicus, or navel, and is easily felt when pressed on by the hand. Nor can it be relieved otherwise than by a surgical operation, taking off the urine by a catheter, introduced into the bladder, which requires to be repeated every eight, or, at least, twelve hours, till the bladder recovers the power of expelling its contents.

BEDSORES

add also to the accumulation of evils to be guarded against. They are caused by the imperfect circulation of the diseased blood, by the effects of moisture, and inattention to cleanliness, and by too much pressure on the parts, as patients lie constantly in the same position. These bedsores should be looked for daily, and as soon as the skin appears red an astringent lotion should be applied, and two ounces of tincture of catechu and one of laudanum, mixed together, suit for this purpose. The soft side of cotton wadding, moistened with this mixture, and applied to the part night and morning, has a good effect in preventing the skin from breaking. But if the skin has sloughed, and appears black, a solution of nitrate of silver (caustic), twenty grains to the ounce of water, applied with a camel's-hair brush, night and morning, is more efficient.

All applications must, however, fail unless means be adopted to lessen the pressure on the affected parts.

For this purpose a long piece of silk, about eight inches broad, sewed like a purse, and then filled with curled hair or other elastic substance, and the ends joined together to form a ring around the abraded surface, should be placed under the patient. This bears the pressure off the sore, and allows it to heal. An air cushion with a hole in the centre, if it can be obtained, suits still better. In the absence of these, pillows must be arranged to serve this end. Similar care is necessary in all cases of long confinement to bed, if the patient lies in one position.

Ventilation of the apartment should be carefully attended to. A fresh supply of pure air, to give us oxygen to renew the blood, is indispensable for persons in health, and incalculably more necessary for patients whose blood is contaminated with the poison of malignant fever. Free ventilation is also necessary to prevent the spread of contagion; and for the same object all drapery should be removed from the chamber, and every article of furniture that is not absolutely necessary for the comfort of the patient.

Cleanliness should be scrupulously attended to. All excrementitious matters should be immediately removed, and the effluvia controlled by the use of Condry's disinfecting fluid, or carbolic acid. The chlorate of lime is too pungent.

About the fourteenth day, or from the twelfth to the fourteenth, a critical change may be looked for. This is sometimes preceded by raging delirium, and an exacerbation of the symptoms; after which

the patient falls into a sound sleep, from which he awakes greatly composed and refreshed.

In other instances a change for the better sets in gradually; the depression of spirits abates; the pulse becomes less frequent; the spots decline; the tongue begins to clean; nourishment is relished; and reason resumes her empire.

Convalescence will now proceed favourably, if it be not interrupted by the fondness or folly of friends and nurses, who often injure patients by encouraging them to overload the stomach, or take food that is too strong for their weak state.

The weakened stomach can digest only the most delicate food, and the impoverished heart could not circulate any large quantity of blood if sent to it. The greatest caution is therefore necessary in making any change of food or drink.

Ground rice, arrowroot, or maizena, boiled in water, and eaten with the beef- or mutton-tea, or Liebig's essence, as formerly, is the most suitable form of solid food to commence with; and to encourage the patient to chew, and exercise the salivary glands, a little stale bread may be given in place of arrowroot for dinner. The half grain of quinine should be continued as formerly, unless it gives headache, and, if so, a wineglassful of infusion of chiretta or quassia should be substituted for it.

If improvement progresses, after a few days a lightly-boiled egg with tea and dry toast may be tried for breakfast; and a little chicken, roast or boiled, and a little stale bread, for dinner; with ground rice or maizena in the evening. But tea in the evening, or beef or mutton for dinner, should not be resumed till the patient can take exercise.

In place of favourable symptoms about the fourteenth day we too often have the opposite; a dark, dry tongue; a rapid, irregular pulse; a wild, or else low, muttering delirium; the patient lying with open eyes, insensible to anything; twitchings of the muscles; picking with the fingers to remove something from the bed-cover; followed frequently with coma, or the sleep of death.

Such symptoms indicate extreme weakness, and a hard struggle between the vital principle and the poison of the disease; and the great object now is, to fan the flickering flame.

Some give wine or brandy in large quantities, but I place more confidence in stimulating food of a fluid kind—Liebig's essence, beef- or mutton-tea, or fowl boiled in vacuo, given alternately every two hours, with half a grain of quinine in each quantity, say a tea-cupful.

Much now depends on good nursing, for if the patient be allowed to sleep over a period, and to miss his nourishment at the proper time, or his stimulant, if wine be preferred, our hopes are shipwrecked, and the result is certain to be fatal. But with good nursing very bad cases may recover, and while the patient can swallow nourishment we need not despair.

When recovery is established it is permanent, because relapses do not occur in typhus fever; nor is the same person subject to it a second time. But many do not recover their former vigour for months, and some are never afterwards so strong either in body or mind.

Happy instances do, however, occur, and persons who had suffered from some chronic illness during the previous portion of their life have, like the eagle, renewed their age by an attack of typhus or other epidemic fever, and become healthy, energetic, and robust.

After recovery from fever a shower-bath, tepid at first and cooled down gradually, is very serviceable for preparing the patient for exposure to the open air, and for sea-bathing if it be seasonable. But change of air is always advisable, care being taken to select a locality not exposed to bleak, cold winds, and not marshy. To prevent infection, wearing apparel should be kept in an oven for two hours, heated to 220° Fahr.

TYPHOID FEVER.

This was formerly considered a mild form of typhus fever; but more accurate observation has established the belief that it is a distinct species, affecting the constitution in a different manner, and electing a different part of the human frame as its field of action.

This fever is also popularly termed the twenty-one day fever, being noticed to be more tardy in its course, and the critical change more likely to occur about the end of the third week. The tongue is early coated, but not so dry or dark as in typhus; nor is the complexion so altered.

It is true we have an eruption appearing about the second week; but it is not so large as in typhus, nor of the same purple hue. It is scarlet-coloured; neither is it permanent, as in typhus.

On the contrary, the eruption is very inconstant; in some cases not seen at all; in others appearing at a few points on the chest and abdomen, and even then vanishing in a few days; while other spots may appear in different parts of the body.

The pulse, too, is much more variable, often falling, and again becoming more frequent, without any evident reason.

It is further distinguished from typhus fever by the bowels being affected from an early period of the attack, diarrhoea being a constant accompaniment, and dysentery or bloody flux frequent, owing to the glands in the small bowel being inflamed and ulcerated, which does not occur in typhus fever.

In the article on typhus we stated that patients having that fever do not relapse, nor are they subject to it a second time ; but persons affected with typhoid fever are prone to relapse, and are not protected from another attack.

It has been ascertained also that a person who has had typhus fever may afterwards get typhoid fever, the one giving no protection against the other. And while typhus is generally found in the miserable hovels of the poor, typhoid fever frequently ascends to the chambers of a palace.

Either of these fevers is contagious, and capable of being communicated from one patient to another ; and to prevent the spreading of this fever is a desideratum. Condyl's disinfecting fluid, or carbolic acid, has certainly the power of destroying any unpleasant effluvia ; and a piece of cloth saturated with either, and suspended in two or three places in the apartment, should be used for that purpose. Any of the chlorides have the same effect, but their pungency is too much for some patients. But these should never be substituted for free ventilation and attention to cleanliness, as directed in the article on typhus, to which we beg to refer the reader.

A fire in the sick chamber is generally necessary for the comfort of the attendant, and has considerable influence in increasing ventilation, by causing a current of air up the chimney, which must carry off a quantity of foul air. But all these means together give no certain protection ; nor can any coverings or garments that have been near a fever patient be considered free from contagion unless they have been fumigated for two hours in an oven at a temperature of 220° Fahr. And articles of furniture should be fumigated with sulphur.

Typhoid fever is frequently met with in Australia, to which it is imported by immigrants who arrive there from Europe. It generally assumes a mild form, and in that climate is so little contagious that in the Sydney Infirmary we had no fever ward ; nor did it spread to other patients.

The patients were often depressed in spirits, and suffered from

diarrhœa, as in typhus fever ; but attacks of dysentery were of rare occurrence.

In Queensland, in 1866, it assumed an aggravated type, dysentery being frequent, and hæmorrhage from the bowels in some cases troublesome, and difficult to control.

Treatment.—As we have mentioned before, the hope of cutting short any fever got by contagion is, in our opinion, illusive. The poison is in the system, and all that can be done is to assist the constitution to eliminate it, for as yet our best means are too often inefficient.

We should always place the body in a favourable condition to contend with the disease, and that is the horizontal position, to equalize the circulation of blood, aided by sameness of temperature.

Some imagine that because there is a determination to the bowels in this fever, we need not be anxious about the safety of the brain. But with this opinion I cannot coincide : for in all the fatal cases that I have seen the brain was affected, and death evidently resulted from a cessation of nervous power.

The head should be kept cool from the onset of the attack, and whenever the heat of head is above the natural temperature, the hair should be shaven off, which is the best means of retaining it, for it must fall after the fever.

As a cooling application, cold water with a little ice kept in it does very well, if applied by a thin rag often renewed, or ice in a bladder or bag of oiled silk ; but the addition of a little Eau de Cologne is grateful to those who are fond of perfumes ; but vinegar added to the water soon irritates the skin.

The last food that was taken before the attack is too likely to remain in the stomach undigested, or by passing in that state into the bowels would cause irritation ; and therefore a mild emetic of ipecacuan, twenty grains in a cupful of water, taken in three portions, with an interval of ten minutes, is generally sufficient ; but, if necessary, its action may be increased by tickling the throat with a feather, and drinking tepid water.

Two hours after the emetic, the patient should take half a grain of podophylline and ten grains of salts in a little syrup ; or, if preferred, five grains of calomel and two grains of aloes in syrup, either to be followed by half an ounce of salts, if the bowels do not act in eight hours.

The bile having thus been carried off, the bowels seldom afterwards require an aperient in this fever ; but if it is necessary, a tea-

spoonful of Epsom salts, dissolved in a cup of ginger-tea, can be taken when required.

To drink freely of toast-, barley-, or rice-water, or rennet whey, is sufficient nourishment for the first four days. And twenty drops of sulphuric acid in such drink, taken through a glass tube, or from a cup with a long beak, to protect the teeth, should be given every six hours, to prevent putrefaction of the fluids, and abate thirst.

The state of the bladder must be attended to, and bedsores must be looked for carefully, and treated as directed in the article on typhus fever.

As soon as diarrhœa commences, an astringent should be given. For this purpose, half an ounce of precipitated chalk, an ounce of the tincture of catechu, two drachms of laudanum, with four ounces of water, should be mixed together ; and of this mixture a male adult should take a dessertspoonful every eight or twelve hours, as required, to check the lax. Younger patients should take less, in proportion to age ; and as there is no syrup in the mixture it will keep any time, and sugar can be added to each dose.

Should there be much tenesmus (straining), or a desire to sit long at stool, it is best relieved by twenty drops of laudanum, in a dessertspoonful of sweet milk or oil, thrown up into the bowel by a small syringe each evening, the astringent being continued. Any large quantity thrown up as an enema must disappoint, because it irritates the bowel, and cannot be retained.

A tympanitic state of the bowels often occurs, the bowels being distended with flatulence, to an extent that is oppressive to the patient's breathing, and is always an unfavourable symptom in typhoid fever. Under such circumstances, I have found oil of turpentine the best remedy ; given in doses of twenty drops, in a wineglassful of sweet milk, every three hours, it has an admirable effect. It dispels the gas, improves the dysentery, and is the best stimulant that can be given, superior to either wine or brandy.

Nourishment at this period of the fever must not be neglected. If the patient's tongue is whitish and relaxed, fluid animal food generally suits best, as Liebig's essence, beef- or mutton-tea, or fowl boiled in vacuo ; but if the tongue is red and irritable looking, farinaceous food is more likely to answer, as ground rice, arrowroot, or maizena boiled in water, and made palatable with milk. Whichever is adopted, must be given in moderate quantity every three hours ; and the nurse should be often reminded that any irregularity in giving either food or medicine, may seal the fate of the sufferer.

Ulcers in the bowels often remain unhealed for a considerable time after the fever leaves ; and, consequently, hæmorrhage from the bowels is apt to recur. Convalescent patients, ignorant of this, frequently increase their own weakness and suffering by eating food that does not suit them. Any bulky food, as solid animal food, especially fish, most vegetables, and many fruits, by causing a large quantity of fæculent matter to pass through the bowels, distend the bowel, drag open the ulcer, and renew the hæmorrhage.

Nor is it easy to withstand the craving of the emaciated patient for solid food ; still his safety requires firmness on the part of his attendants, and fluid food must be adhered to, until the loss of blood ceases. But as rice is the least objectionable of solids, a little ground rice, well boiled in water, may be added to each quantity of fluid food every six hours.

The shower bath and change of air, as advised for patients recovering from typhus, are equally desirable after typhoid fever.

RELAPSING FEVER.

This fever is also contagious, and is popularly termed the five-day fever, because a critical change generally takes place about the fifth day.

In the district of my dispensary in Ireland it prevailed to a considerable extent in the spring of 1839, and in the same neighbourhood where we had typhus fever two years previously.

It commenced with pains in the limbs and joints, headache, nausea, and shivering, followed generally by bilious vomiting. The pulse was high, always above a hundred ; the tongue was white and coated, and the bowels costive.

Delirium occurred in some of the cases, but not in all. The skin was dry and hot at the commencement of the fever, but about the fifth day perspiration appeared, and with it an alleviation of the symptoms.

After the perspiration, the patients seemed to recover for about a week, when many of them were taken ill in a similar manner, some even a third time, and finally recovered.

It was not nearly so fatal as typhus fever, but the relapses left the poor creatures miserably emaciated. Nor did all relapse, and I noticed that when the perspiration was partial, affecting only part of the body, a relapse was certain to occur ; but when the perspiration was general and profuse, the recovery of such patients was perfect.

Treatment.—Perfect rest is necessary for the recovery of patients from this as well as other fevers, and should be insisted on.

If nausea prevailed without vomiting, twenty grains of ipecacuan, in a cupful of water, given in three portions, with an interval of ten minutes, had a good effect, but if the stomach relieved itself, the emetic was dispensed with.

Three grains of calomel and two of aloes, in a little syrup, or, if convenient, half a grain of podophylline and ten of salts, is equally efficient and safe, to carry off the bile.

Diluent drinks, as toast-, barley-, or rice-water, taken freely, afford sufficient nourishment till the fever abates; and ten grains of nitre in such drink, every six hours, lessens the fever.

Ten grains of Dover's powder, given to a male adult, and less in proportion to age, on the fourth evening, increased the critical sweat, and seemed to lessen the tendency to relapse.

The bowels should be regulated during the continuance of the fever, by two grains of aloes and ten of salts, taken in syrup, at night, if required.

After the fever subsides, the food should be farinaceous only, as rice, arrowroot, or maizena, boiled in water, and eaten with milk, for some days. Solid animal food taken too soon is sure to cause a relapse.

In constitutions previously infirm, complications occur, requiring mustard plasters, or stupes of turpentine, to the bowels or chest.

SMALL-POX.

This is the last of the contagious fevers we have to notice. In Australia it is as yet little known, but in Ireland I saw a good deal of it in 1835 and 1836. It attacks only once during life; but to this rule there are some exceptions.

The symptoms of this fever are different from every other at the commencement.

Some patients fall down in a fit, as if taken with epilepsy, while others are intensely sick at stomach, and have severe pain of back; sickness at stomach being so frequent that few escape it. The skin is always hot and dry, and the pulse full, and very frequent in its beat.

These symptoms occur generally about two weeks after the person has been exposed to the contagion, which period is termed the "incubation."

About the third day after these symptoms a pustular eruption begins to form on the forehead and face, from which it extends to the arms and body, and finally to the lower extremities; and to the mucous membrane of the nostrils, mouth, and throat.

These pustules go on increasing till the eighth day, when they begin to burst, and then scabs form. If the pustules remain separate, the disease is reckoned mild; and when they unite in clusters, it is called severe or confluent small-pox.

After the eruption appears, the face becomes very much swollen, the features greatly altered, and the eyes frequently closed up; and the severity of the case may be estimated by the abundance of the pustules. When these are few, there is little danger to be apprehended, but in the confluent form the risk of life is very great. In this form an exacerbation generally occurs about the eighth day of the fever, and this frequently proves fatal.

In favourable cases the crusts or scabs begin to fall off about the fifteenth day, leaving a purple stain at the base of each pox, which remains for some time, or else a cicatrix or mark, which is permanent for life.

Treatment.—Rest in bed, which is necessary in other fevers, is equally required in this, and to unload the liver and biliary ducts is very important. For this purpose the patient should get five grains of calomel and two of aloes, or, if convenient, half a grain of podophylline and ten grains of Epsom salts, in syrup; either to be followed by half an ounce of Epsom salts, if the bowels do not act in eight hours; and afterwards the bowels should be regulated by two grains of aloes and ten of salts, given in syrup or pills at night, when the bowels do not act.

The drink should be toast-, barley-, or rice-water, or rennet whey, which afford sufficient nourishment for the four first days, till the eruption forms; and ten grains of nitre should be given in such drink every six hours during the continuance of the fever.

After the eruption comes out, ground rice, arrowroot, or maizena, boiled in water, and eaten with a little milk, ought to be given thrice a day; and at the same period the head should be shaved, and if delirium sets in, the head should be kept cool by damp cloths frequently renewed.

Ventilation, so necessary in all fevers, is especially requisite in small-pox, both for the comfort of the patient and the attendant, for about the eighth day the effluvium from the pustules is very oppressive. In addition to strict attention to cleanliness, Condyl's disin-

fecting fluid, or carbolic acid, should be used by dipping cloths in a solution of either, and hanging them up in suitable places in the apartment.

After the sixth day the constitution should be supported by Liebig's essence, beef- or mutton-tea, or chicken broth, given in place of milk, with the ground rice, arrowroot, or maizena. Solid animal food should never be allowed before the ninth day, when, if no exacerbation or secondary fever appears, the patient may have a lightly-boiled egg, or a little roast fowl, with stale bread once a day for dinner, provided soreness of mouth does not incapacitate him for eating solid food; and if this be borne well, the usual diet can be returned to cautiously in the course of a day or two.

To prevent the spread of contagion, all the bedding and apparel that had been in contact with the patient should be fumigated for two hours in an oven at the temperature of 220° Fahr., and the apartment and furniture should be fumigated with sulphur.

Vaccination has happily rendered the prevalence of small-pox rare even in Britain; and it is to be hoped that this prophylactic measure and other sanatory means will soon free humanity from this scourge.

The shower bath, tepid at first, and cooled down gradually, is necessary to prepare the patient for exposure to the open air, and the body should be protected from chills by warm clothing; for the sequel of this, as of other contagious fevers, is often marked by some remnants of the poison in the system.

It is true the reverse of this occasionally occurs, and some, as a recompense for their change of aspect, seem to get a new and better constitution.

RHEUMATIC FEVER.

This fever, which is also called acute rheumatism, is not infectious, but it is generally admitted to arise from a diseased state of the blood, in which acidity prevails, while it is also considered to be of hereditary tendency.

The exciting causes which induce an attack are excesses in eating and drinking, especially malt liquors, or beer made with sugar, and exposure to wet or cold.

Rheumatic fever prevails most between the age of fifteen and fifty; but it occurs also to children who get alcoholic stimulants, or who inherit the gouty diathesis. Both sexes are subject to it, but the male most frequently.

The fever is of the inflammatory character, and the tendency of the inflammation is to affect the fibrous tissues, as the ligaments of joints, and the sheaths and tendons of muscles ; and we find that by sympathy it causes also inflammation of the synovial membranes, and effusion into joints, as well as pain and swelling around the affected joints.

The first symptoms of an attack are stiffness and pain of some large joint, the knee, elbow, or wrist, or perhaps the shoulder or hip joint. Swelling of one or more joints soon follows, with increased pain, anxious countenance, flushed face, coated tongue, and accelerated pulse.

Restlessness is also a peculiar characteristic of this fever. The pain renders the patient incapable of moving himself, and he is continually wishing for a change of posture to relieve his sufferings.

Nor is this restlessness of the patient more remarkable than the moving character of the inflammation, which is continually changing from one joint to another, and frequently to the heart.

The latter tendency forms the most important aspect of this fever, and is always the cause of much anxiety to the attendant, and danger to the patient. It is certain, however, that the order of the attack is sometimes reversed, the heart being the first affected, and the joints afterwards.

When the inflammation seizes the heart, the pericardium or surrounding membrane becomes inflamed, and we have lymph thrown out, by which the folds of this membrane adhere together, or fluid is thrown out into its cavity, producing effusion into the pericardium ; either of which is sufficient to impede the action of the heart, and imperil life.

From the external membrane inflammation extends, by sympathy, to the lining or mucous membrane of the heart ; and we get warty deposits of fibrin on the valves of this vital organ, which cause the peculiar bellows murmur in the pulsations of the heart, and never fail to shorten the existence of the sufferer, should he outlive his present attack.

Delirium is not very frequent in this fever, but it occurs occasionally, and is always a bad symptom. But the most marked and constant peculiarity is the incessant perspiration, of an acid, unpleasant odour, that always accompanies this fever.

In other fevers, abundant perspiration often terminates the attack, and seldom fails to give temporary relief from suffering ; but in this disease, although perspiration is evidently an effort of the constitu-

tion to throw off the poison in the system, still the abundance of it can only be taken as a measure of the severity of the attack, and not as the harbinger of ease to the patient, or the termination of his malady.

On the contrary, as the fever declines the perspiration abates, and is always lessened by medicines, which alleviate pain and promote recovery.

Treatment.—As no specific has yet been discovered for the cure of this fever, a variety of remedies have been tried by different practitioners, who have found them useful in certain cases.

Some bleed largely, and give calomel freely to carry the poisonous matter out of the system; but experience of these in hospital long since prevented me from using such means.

Others have lauded the juice of lemons, in large doses, as a certain cure; but I am sorry to say that in my practice it did not prove so.

Alkalies to correct the acidity of the blood, and anodynes to alleviate pain, are, in my opinion, the most worthy of confidence.

To allay the heat and swelling of the joints, some recommend cold lotions; but the tendency of the inflammation to migrate from one part to another, and especially to the heart, forbids the use of anything calculated to repel, and causes me to consider this a hazardous advice, which should not be followed.

The plan of treatment that I found most efficacious was to unload the bowels and biliary ducts by half a grain of podophylline and ten grains of salts, or, if preferred, five grains of calomel and two grains of aloes, in a little syrup: either to be followed by half an ounce of Epsom salts, in a cup of ginger-tea, if the bowels did not act in eight hours. The bowels having been relieved, the patient should get ten grains of Dover's powder every six hours, till pain abates, and after that five grains every six hours, to prevent a return of pain. He should also get twenty grains of the bicarbonate of potash, ten grains of nitre, and ten drops of colchicum wine, in a cup of warm water, every six hours, alternately with the Dover's powder; so that one of these may be taken every three hours, till pain abates; and then the colchicum should be reduced to five drops, the potash and nitre being continued.

Some make an effervescing draught of this mixture, but the acid used for this purpose neutralises the effect of the alkali, and robs the patient of its good services in correcting the acidity of the blood.

To alleviate the pain of the joints, equal parts of sweet oil, harts-

horn, and laudanum, one ounce of each, forms an efficient liniment, with which the affected joints should be rubbed freely night and morning, and then covered with the soft side of cotton wadding.

The drink should be toast-, barley-, or rice-water, or rennet whey, but tea and coffee excite the nervous system, prevent sleep, and are injurious.

The food should be ground rice, arrowroot, or maizena, boiled in water, and eaten with a little milk, until the fever abates; and then beef- or mutton-tea or chicken broth can be given with stale bread, once a day, for dinner, if the patient has an appetite for fluid animal food.

Alcoholic stimulants of every kind are injurious, and must be prohibited.

Colchicum disagrees with some patients, causing sickness of stomach, prostration of strength, or diarrhoea. In such cases the dose must be lessened to four or five drops. In some constitutions it seems to constipate the bowels, which is unfavourable to its action on the disease, and should be obviated by a dessertspoonful of Epsom salts, taken in a cup of ginger-tea, every morning and evening, if required.

Some stomachs will not bear the Dover's powder and colchicum together, and if so, one grain of the extract of opium, or one-fourth grain of the muriate of morphia, can be substituted for the Dover's powder, every six hours. These doses are generally sufficient, but in some cases the pain is so severe that the opiate must be increased to two grains of the extract or half a grain of the morphia. As soon, however, as the pain abates, the anodyne should be reduced by one half, and then left off during the day, and given at night to secure sleep.

Patients suffering from rheumatic fever should lie between blankets, as damp sheets cause a chill and prolong the fever, which is, at best, tedious enough. If the case be severe, recovery seldom takes place before two weeks, and many suffer much longer; while relapses are too frequent.

When the heart becomes affected, the patient complains of severe pain in the left side, accompanied with difficulty of breathing, and a disposition to sigh. At this crisis half a dozen leeches should be applied over the seat of pain, and the bleeding encouraged by flannels wrung out of hot water; two grains of the extract of opium or half a grain of muriate of morphia should be given, and the colchicum mixture, alternately, every three hours, as before.

As soon as bleeding ceases, the surface should be covered with the anodyne liniment and wadding; but if leeches be not convenient, a large mustard plaster should be put on the seat of pain, kept on till the surface is perfectly red, and then replaced with the anodyne liniment, which course should be repeated every eight hours, till pain of heart abates.

The tincture of *actæa* (black snake-root), in forty to sixty-minim doses, is lauded by the Americans as a cure for rheumatic fever, and when *colchicum* disagrees is certainly serviceable.

When convalescent, patients should not be hasty in using solid animal food, nor in getting out of bed. The joints remain weak and easily injured for some weeks, and any attempt to exercise too soon may cause a relapse, or inflict permanent injury.

To perfect the recovery, two grains of the iodide of potassium, in a wineglassful of water, should be taken after breakfast and in the evenings, and one grain of quinine after dinner, as soon as the patient begins to eat animal food.

Tepid shower baths every morning, with plenty of friction after, if cooled down gradually, prepare the patient for exposure to the open air; and, when sufficiently strong to bear it, sea-bathing is commendable, in the season.

Exercise by carriage or on horseback at first is safest for the joints; and the dress should be sufficient to protect from cold, while chills should be carefully guarded against.

CHRONIC RHEUMATISM.

THIS disease may be caused by exposure to wet or cold, by suppression of the insensible perspiration, or by food or drink that does not suit the constitution. It is sometimes a sequel of rheumatic fever when the disease has not been perfectly eliminated from the system, or owing to want of care when recovering.

It may attack the muscles of the back and cause lumbago, or those of the neck and produce the "crick in the neck"; or in a form still more troublesome, and affect the sheath of the sciatic nerve, causing sciatica. A finger is often chosen as the seat of chronic rheumatism, or it may select the muscle on the top of the shoulder, and render the person unable to raise his arm. The muscles on the front of the thigh frequently suffer from it, and the calf of the leg

is a favourite seat, the pain extending along the sheath of the tendon down to its insertion at the heel.

We find it assuming different forms in each constitution. Some patients have no pain while the body or part is cool, but as soon as they retire to rest and get heated in bed the pain commences, and banishes sleep. Others again are relieved by warmth, and punished by the slightest cold, the breeze that gladdens the heart of many being to them intolerable.

Treatment.—For the form of rheumatism which is relieved by cold, sea-bathing is a good remedy, and if this be not convenient, the cold shower- or plunge-bath night and morning, or cold water poured from a jug or kettle on the affected part.

If heat be grateful to the patient, a hot bath at 102° Fahr. taken each night, with flannel worn next the skin, or the Turkish bath, is serviceable, and for such subjects a warm climate is preferable.

In the chronic form of rheumatism we have not the same amount of acidity in the blood as in rheumatic fever, or acute rheumatism, but we always have evidence of excess of acidity, and such patients are generally dyspeptics.

The food and drink must therefore be attended to and the digestive powers improved ; everything calculated to cause acidity of stomach must be avoided, and all alcoholic drinks, especially fermented liquors, must be abstained from before we need expect medicine to act favourably.

As the iodide of potassium has an especial influence in correcting acidity in the blood, I place particular confidence in it as a cure for chronic rheumatism. The dose for a strong adult should be five grains in a wineglassful of water, after food, thrice a day, lessening the dose according to strength and age, to one grain for a child of ten years, thrice a day, after food ; and the bowels should be regulated by two grains of aloes and ten grains of Epsom salts, in a little syrup at night, when required.

As a local application a mustard plaster applied frequently is very serviceable, or ironing the part with a hot iron, cloth being placed over the skin to prevent its being seared, or a stimulating liniment of sweet oil, hartshorn, and laudanum, one ounce of each, mixed together, and a teaspoonful rubbed on every six hours.

Warm clothing cannot be dispensed with, and the shower bath, tepid at first, and cooled down gradually, is very serviceable.

RHEUMATIC GOUT.

THIS is a disease which some ignore and dispute the existence of, but for our practical purpose the term is sufficient to denote that affection of the joints which seems to partake partly of the nature of rheumatism and in part of gout, while it differs from both.

It is not acute rheumatism or rheumatic fever, because it generally attacks one joint only, is attended with little fever, and does not attack the heart; and it is distinguished from gout by a greater effusion into the joint, less external inflammation, and much less pain than accompanies this affection, while it never attacks the great toe, the favourite seat of gout.

But its affinity to both these diseases is evinced by the dyspeptic symptoms that precede the attack, and by the evidence of imperfect assimilation, in patients who suffer from it.

The exciting cause of an attack is generally exposure to wet or cold, after which the knee, elbow, or wrist-joint becomes swollen and inflamed, with considerable effusion into the joint, which, when pressed on both sides, feels soft and fluctuating. There is not much fever, but the tongue is coated, and the pulse is more frequent than natural.

Treatment.—As bed is the proper place for persons suffering pain and requiring rest, the patient should at once retire, no matter what joint is inflamed, as his recovery will be greatly hastened by posture and equability of temperature.

Colchicum is the medicine which has most influence over this disease, and a male adult should get ten minims of wine of colchicum and five of laudanum in a little warm water every eight hours; and he should also get twenty grains of nitre in a cupful of toast-, barley-, or rice-water, which should be his drink, given every eight hours, alternately with the colchicum, so that one of these be taken every four hours; and the bowels should be kept acting by two grains of aloes and ten of salts, given every night in treacle or syrup, and followed next day by a dessertspoonful of salts, if the bowels do not act freely.

The affected joint should be rubbed every eight hours with equal parts of sweet oil, hartshorn, and laudanum, and kept perfectly quiet till the inflammation subsides.

The diet should be farinaceous, and all alcoholic stimulants should be avoided.

We meet with persons who show a constitutional tendency to rheumatic gout, although they may not be attacked with inflammation or effusion into any joint. With such persons the joints occasionally feel stiff, and crack when moved suddenly, or they can be made to crack at will. Such constitutions should abstain from alcoholic stimulants, clothe warmly, and guard against exposure to wet, cold, and sudden changes of temperature, to prevent an attack.

NEURALGIA.

THIS disease is often taken for rheumatism, to which it is somewhat similar, but is distinguished from it by the absence of inflammation.

It is caused by sympathetic or reflex action of the nervous system; and attacks of neuralgia are characterized also by their instantaneous approach and the suddenness of their departure. Thus, *tic-douloureux* of the face, caused by sympathetic action of the fifth pair of nerves, ceases at once when the stomach is relieved of what irritates it.

The pain of neuralgia is also peculiar in ceasing during sleep; as we learn from the stiffness caused by spasmodic action of the muscles in wry neck being absent while the person sleeps.

Neuralgia of the chest often simulates the pain of pleurisy; but the former is seated near the front of the chest, where the ribs join the breast-bone, while the latter, pleuritic pain, affects the side, generally about the centre of the ribs. Still, both cause acute pain when making a full inspiration.

Treatment.—The great cause of neuralgia is injury of the stomach, as described in the article on dyspepsia, to which we beg to refer the reader; and to this organ our remedies must be applied. If the stomach is occupied with indigestible food, twenty grains of ipecacuan should be given in a cupful of water, in three portions, and vomiting should be encouraged, if necessary, by tickling the throat with a feather, and by drinking tepid water after each effort to vomit.

The diet afterwards should be strictly attended to. Everything that is difficult to digest should be avoided, and strong tea, alcoholic stimulants, and tobacco should be discarded. The bowels should be regulated as directed in the article on constipation. Tonics are always serviceable, and iron suits the greater number. Ten drops

of the solution of the perchloride of iron should be taken in a wineglassful of water, through a glass tube, after breakfast and dinner; but a wineglassful of infusion of camomile or quassia, after meals, does better with some, or the bitter after breakfast and the iron after dinner.

As local applications, a mustard plaster to the chest at short intervals is a good remedy, and equal parts of chloroform and laudanum, on brown paper, relieve pain of face.

Change of air and travelling always serve such patients.

GOUT.

ALTHOUGH this disease is generally admitted to be of hereditary origin, yet it may be acquired by persons whose ancestors never suffered from it. It attacks men much more frequently than women, and is met with chiefly in the middle period of life.

In its first attack it is easily distinguished from rheumatism by the seat of the inflammation, which is almost invariably the great toe of the right foot, while rheumatism selects a larger joint.

Afterwards, when the constitution has been brought more fully under the influence of the disease, both the great toes, the ankles, and other joints may be affected, and then the distinction is less marked.

Still we are enabled to discriminate by the absence of the wasting perspiration, so peculiar in its odour, that characterizes rheumatism, and the presence of greater pain, together with the bright red colour of the inflammation around joints affected with gout.

Gout is also the offspring of affluence and indolence—the inheritance of the rich; and an attack is generally traceable to too much indulgence in the good things of the table, and especially fermented liquors and port wine.

This disease is popularly said to give long life and bad health; there being a general but false impression that each attack renews the constitution. It is true that any person when recovered from an attack of gout feels better than he had done for some time previously, but the more frequent returns of after-attacks, and the increased number of joints affected, prove too fully that the constitution is being gradually undermined, and must finally succumb.

Gout generally attacks suddenly. A person in robust health is awakened from his first sleep by excruciating pain of his great toe,

which in the morning is found considerably swollen, of a bright red colour, and extremely sensitive to the touch.

The tongue of the patient is slightly coated, the pulse is accelerated, and the skin dry and feverish ; but the most remarkable symptom is the extreme irritability of persons suffering from gout.

The slightest touch seems agonising to their feelings ; while a footstep on the floor, or the least movement of an attendant, is dreaded by them, and the weight of the bedclothes is intolerable.

Treatment.—The first thing to be done is to protect the affected toe or joint from pressure or friction by the bed-coverings. And this is easily done by an arch of wickerwork, about eighteen inches high, two feet long, and one foot wide ; the base being two pieces of board about six inches broad, with the wickerwork placed near the inside of the board to make it more steady.

To carry off the bile the patient should get five grains of calomel and two grains of aloes, or, if convenient, half a grain of podophylline with ten grains of Epsom salts, in a little syrup, either to be followed by half an ounce of salts if the bowels do not act in eight hours. Afterwards the bowels should be regulated by two grains of aloes and ten of salts, given each night if required.

Colchicum is the medicine which has most influence over gout ; and as soon as the bowels have been relieved, the patient should get ten minims of the wine of colchicum and five of laudanum, in a little water, every six hours, and twenty grains of nitre in a cupful of toast-, barley-, or rice-water every six hours, alternately with the colchicum, so that one of these be given every three hours.

As a local application to the inflamed part, the best that I have tried is an ointment made of two drachms of the iodide of lead to the ounce of equal parts of lard and suet, rendered together, and thoroughly mixed. This should be spread on soft calico, and kept constantly applied over the inflamed joint. It soothes pain, and causes the fluid to be absorbed.

Leeches when applied only increase the irritation, and cold lotions are very hazardous, being calculated to repel the inflammation and drive it from the extremity to the stomach or brain.

In the article on rheumatism we noticed the tendency of the inflammation to attack the heart ; but in gout the tendency is to migrate to the stomach or brain, which forbids the use of cold applications, and requires great attention to the food and drink.

When gout attacks the brain it may cause apoplexy and paralysis, the treatment for which we have already advised. But this disease

most frequently attacks the stomach, and when it is seized the pain is so excruciating that large anodynes are required to allay it. Half a grain of morphia, in solution, should be given at once, and one-fourth of a grain every three hours afterwards till pain abates.

An effort should also be made to bring the inflammation back to the extremities, by a mustard bath applied to the feet, or a mustard poultice to the great toe or the former seat of the inflammation, while the wine of colchicum and the nitre are continued every six hours, as before.

The subjects of acute gout being persons accustomed to live freely, they seldom relish low diet, even when confined to bed by an attack; but in my practice I never allowed solid animal food until the disease had subsided. Beef- or mutton-tea or chicken broth, with a little rice well boiled, or stale bread if preferred, is sufficient nourishment, but solid animal food increases the pain, and aggravates the inflammation.

As an attack of gout seemed to me a good opportunity for such sufferers to change their habits, and leave off the use of stimulants, it was my rule to order none; but if a patient would not be guided, and must have some alcoholic drink, a little brandy and water is, perhaps, the least noxious to the system.

The formation of chalky deposits around the joints is a very marked and characteristic peculiarity of gout, nor has science yet discovered any sufficient means of removing such deposits. As they are found, however, to consist of urate of soda, gouty subjects should not use soda to correct acidity of stomach; the bicarbonate of potash is preferable. And if they wish to enjoy good health, they must live moderately in future, and exercise regularly and freely in the open air.

But the formation of chalky deposits in and around joints occurs principally in the chronic or milder forms of gout, to which persons in the lower ranks of life are subject. The inflammation and pain in such cases are less severe. Less fluid is thrown out, is of thicker consistence, and it soon assumes a solid form. The joints soon become distorted and immovable; and so many, even of the large joints, may be affected, that persons still in the prime of life are occasionally crippled and bedridden.

Colchicum, which acts as a specific in controlling the fluid thrown out in acute gout, seems perfectly powerless in removing the chalky deposits in chronic gout. For this form the iodide of potassium is the most efficient remedy; but it should be given early, and in full

dose, five grains in a wineglassful of water, after food, thrice a day. And the joints should be covered constantly with a plaster made of two drachms of the iodide of lead to the ounce of rendered suet, well mixed, and spread on soft leather.

The action of the skin should be increased by warm clothing, and frequent warm baths. The food should be light and easily digested, and all stimulants should be abstained from.

LATENT GOUT.

Gout, like mania, consumption, cancer, and other hereditary diseases, may not be developed in each succeeding generation; and the tendency to it occasionally remains dormant in some constitutions, constituting latent gout.

Such members of society are easily recognized by their habits; although active and energetic, they are more sensitive to external impressions than others, and obliged to be more careful of what they eat and drink. They are also frequently depressed in spirits, and morbidly anxious about their pains, aches, and ills.

The kidney is a frequent seat of latent gout, causing severe pain in the side, most frequently the right; and as the liver always sympathises in such cases, the pain is often attributed to congestion of this organ. We are enabled, however, to discriminate by the course of the pain, extending down along the cord to the testicle, which is either drawn up or reduced in size, and less than its fellow on the opposite side.

Such attacks are generally the result of over-exertion or exposure to cold, and are frequently accompanied with considerable fever.

Treatment.—At the commencement of an attack of the kidney, the patient should have a warm bath, at 102° Fabr., for half an hour, to be followed by five grains of calomel and two grains of aloes, or half a grain of podophylline and ten grains of salts, to unload the liver and biliary ducts, either of which may require the aid of half an ounce of salts in a cup of ginger-tea if the bowels do not act in eight hours. And afterwards the bowels should be regulated by two grains of aloes and ten of salts, in a little syrup, at night, as often as required.

The patient should be confined to bed till the feverishness goes off; and if the pain be severe, ten grains of Dover's powder should be given in a little syrup, at night, along with the aperient. To increase the action of the skin and lessen the fever, a teaspoonful of

the acetate of ammonia should be given every six hours in the usual drink, toast-, barley-, or rice-water; and the food should be entirely farinaceous during the attack.

As a constitutional remedy to perfect the recovery and prevent a relapse, I place most confidence in the iodide of potassium, two grains in a wineglassful of water, taken after breakfast and dinner, for a week or two.

Such patients should avoid alcoholic drinks, especially ale and porter. Their food should be light and easily digested, and the body should be protected against chills; and their exercise should be active, but not severe.

OBESITY.

A CERTAIN amount of fat is necessary to fill up angles and depressions, but when accumulated in excess it becomes troublesome, and inimical to our wellbeing, as few overgrown persons have lived to a good old age, and still fewer have been able to relish the active enjoyments of life.

The accumulation of fat often impedes the action of the heart, and by this means seriously impairs this vital organ, deranges the whole machine, and induces weakness both of body and mind; while excess of fat renders the human frame not only inactive but also unsightly, by destroying its symmetry.

Some constitutions are naturally prone to obesity, and persons feeling this tendency, to counteract it have taken acids in such excess as to injure their health.

This is a false and unnecessary plan. It is only requisite to shorten the supplies, to eat more moderately, and avoid those articles of food that form fat.

Mr. Banting, who could not stoop to tie his shoe, and became breathless on the least exertion, by a change of food and drink, under the advice of Dr. William Harvey, was relieved of the redundant fat, and rendered active although sixty-six years of age.

Any person wishing to get rid of obesity should breakfast on a lightly-boiled egg, or one-fourth pound of the lean of beef or mutton, or the same weight of white fish, except eels or herrings, which are oily, with a little dry toast or stale bread, and a cup of tea or coffee, without either cream or sugar. For dinner he should take half a pound of the lean of beef or mutton, fowl or game, with

a little stale bread, and any one light vegetable, as cauliflower, broccoli, turnip, or vegetable marrow, and water only as his drink. In the evening he should take one-fourth pound of cold beef or mutton, or fowl, if preferred, with a biscuit and cup of tea, without cream or sugar.

But he should avoid butter, milk, sugar, soups, broth, potatoes, beans, peas, beetroot, carrot, and parsnip.

Such change of diet is apt to constipate the bowels, which should be regulated by two grains of aloes and ten of salts, taken in syrup at night, as often as required.

DIABETES.

In this peculiar disease, by a morbid action, the nourishment of the body is carried off, through the kidneys secreting an unnatural quantity of urine containing sugar in large quantity.

In a healthy state the kidneys usually secrete from two to three pints of urine in the twenty-four hours; but a patient suffering from this disease will pass, in the same time, from fifteen to twenty pints of urine, of a heavy peculiar odour and sweetish taste.

Patients suffering from this disease complain of no particular pain, but they are languid and depressed in spirits, and their skins are dry and the bowels constipated. As the disease advances, weakness becomes evident, with wasting of the frame and considerable feverishness. The thirst is insatiable, and the appetite voracious, while the sufferer is starved in the midst of plenty; for although strict and judicious regimen may retard the progress of the disease, still a perfect recovery is seldom if ever obtained.

Treatment.—Animal food is found to be the most salutary, and the patient may eat beef, mutton, poultry, game, venison, eggs, milk, and butter, together with cabbage, cauliflower, broccoli, and spinach, but must abstain from potatoes, fruit, and all farinaceous substances, as rice, arrowroot, sago, maizena, macaroni, and vermicelli.

The only form of bread that suits is that made from bran only. The bran should be boiled for ten minutes in two successive waters, being strained out of each on a sieve, and then washed in cold water till it runs off quite clear, and when dried in an oven and ground fine, it should be made into cakes or biscuits for the use of the patient.

The thirst is best allayed by pure water; but as such sufferers

require a great deal of nourishment, they should get frequently half a teaspoonful of Liebig's essence of meat, dissolved in a cup of hot water, or else a cupful of beef- or mutton-tea.

Tea and coffee are injurious in diabetes, and should not be used ; and the action of the skin should be excited by warm baths, and sufficient clothing.

If the patient be restless at night ten grains of Dover's powder has a good effect in allaying irritation and disposing to the skin, but the practice of giving opiates daily is not commendable, A tonic, as one grain of quinine twice a day, after food, is more serviceable ; or if this cause headache, a wineglassful of infusion of chiretta or quassia.

INCREASED FLOW OF URINE.

IN hysterical or nervous subjects the quantity of urine is occasionally so much increased as to simulate diabetes ; but it is easily distinguished by being limpid and clear, and free from the peculiar odour and sweetish taste of diabetic urine.

This affection is also readily distinguished by its generally attacking females, while diabetes is a disease decidedly partial to the male sex. But either sex, when in perfect health, may notice a marked difference in the quantity of urine passed in any given time, because the skin and kidneys alternately act for each other, and if the perspiration be suppressed by insufficient covering, an increased secretion of urine is a natural consequence.

The mind, too, has great influence on the action of the kidneys. Extreme fear has cured an attack of dropsy, and anxiety of mind increases the flow of urine.

Treatment.—Tonics are the kind of medicine best adapted for such patients, and ten minims of the solution of the perchloride of iron in a wineglassful of water, taken through a glass tube, after breakfast and dinner, has a good effect. Costiveness is a constant companion of such attacks, and should be prevented by a mild aperient, as directed for the treatment of that habit.

The frequent use of the shower bath and constant exercise in the open air are necessary for the health and happiness of such patients.

DISLOCATION OF JOINTS.

THESE are of frequent occurrence, and, like other injuries affecting the bones, require immediate attention, because the muscles around the dislocated joint become spasmodically contracted, and reduction or replacement of the dislocated bone becomes difficult in proportion to the time that elapses before it is accomplished.

Still, dislocations of three months' standing have been successfully reduced, but such cases require the artificial aid of pulleys, and the relaxing influence of a hot bath, together with a nauseating dose of tartar emetic, or the use of chloroform. We shall notice a few of those dislocations that occur most frequently.

DISLOCATION OF THE UNDER JAW.

This joint may be dislocated forwards, and with some persons the ligaments become so relaxed that they can scarcely laugh or yawn without causing this dislocation, which has occurred also in the extracting of a difficult tooth, and by children forcing into the mouth some object that distended the jaws too much.

When both sides are dislocated the chin falls down, the person loses the power of speaking or shutting the mouth, from which the saliva drops constantly, and the patient suffers severe pain. If one side only be dislocated the chin is not so much depressed, but the mouth is turned to one side, and the person cannot masticate food.

The injury can be recognized also by touching with the finger in front of the ear, where a depression or hollow is felt, the condyles of the jaw-bone being carried forward under the arch of the cheek-bone. If this hollow is felt only on one side, and not on both, there is evidence that the jaw is dislocated only on one side, but the double dislocation is much more frequent.

Treatment.—The reduction of this dislocation is easily effected by placing the thumb of each hand on the wisdom or last molar tooth, on either side of the lower jaw, then grasping the jaw-bone with the fingers under it, and drawing the jaw gently forward, and at the same time elevating the chin, while, by pressure with the thumbs, the condyles of the jaw-bone are pressed down to their proper place.

Drawing the jaw gently forwards releases the bone from its false position, and aids the action of the thumbs in pressing it down, and raising the chin completes the operation, which is very simple, and requires only coolness, patience, and common dexterity to accomplish it.

Three movements are thus necessary : first, to draw the jaw forwards to dislodge the head of the bone ; secondly, to press the bone down with the thumbs to bring it on a level with the joint or cavity ; and thirdly, to raise the chin to let the head of the bone drop into its socket. To invert this order, and raise the chin first, would inflict more pain, and secure a failure.

When the bone is sufficiently depressed and the chin raised, the muscles draw the jaw back to its place suddenly, and the teeth gnash together, for which the operator should prepare by moving his thumbs out between the jaws and the cheeks, else he may suffer a contusion.

If this dislocation occur to a child, or if the mouth be too small to admit two thumbs, then a piece of thin wood, broad enough to extend over the teeth on both sides, and firm enough to press down the molar teeth, should be introduced into the mouth, and while the jaw is drawn forward by the left hand under the chin the molar teeth should be pressed down by the wood in the right hand, and the chin elevated at the same time ; and if the dislocation is single, pressure is required only on the affected or displaced side.

When the dislocation is reduced, a piece of broad calico, slit at each end so as to make four tails, should be placed under the chin as a bandage, of which two ends should be attached to the night-cap in front and two behind, to prevent the jaw from dropping down, and the dislocation being renewed, if the person yawned.

The patient for some days should have fluid food only, as milk, thin gruel, arrowroot, or maizena, boiled in water and eaten with milk, or beef tea or chicken broth, and not attempt to chew solid food too soon.

DISLOCATION OF THE SPINE.

This may occur at the nape of the neck between the first and second vertebræ, and generally proves fatal by compression of the spinal marrow. It may be caused by the absurd and dangerous amusement of lifting a child by the chin and back of the head, but in other parts of the spine a dislocation cannot occur without fracture of the spine, the result of some external injury or violence.

Treatment.—To extend the neck by pulling gently in a straight line is all that can be done, and parents should be prepared for a fatal result.

DISLOCATION OF THE SHOULDER.

The shoulder joint may be dislocated in three directions: first, downwards, with the head of the bone into the axilla or armpit; secondly, forwards, with the head of the bone under the clavicle or collar bone; or thirdly, backwards, with the head of the bone on the lower part of the scapula or shoulder blade. A dislocation upwards can only be partial.

The dislocation with the head of the bone down into the axilla or armpit is very frequent; that forwards, with the head of the bone under the clavicle or collar bone, occurs occasionally; and that backwards, upon the lower part of the scapula or shoulder blade, is a very rare occurrence.

Dislocation downwards into the axilla or armpit is recognized by the elbow standing out from the side, and incapable of approaching the side, while the patient supports it with his hand to prevent pain by motion. The shoulder droops also; but this appearance is common to fractures as well as dislocations, as the body naturally leans to the injured side.

The most certain criterion is, however, the length of the arm, measured from the top of the shoulder to the point of the elbow, and compared with the opposite arm.

If fractured the arm would be shorter, or, at least, not longer than the opposite arm; but when dislocated it is invariably longer by an inch.

When dislocated downwards we can feel the head of the bone in the armpit, by moving the elbow a little out from the side to depress the head of the bone.

Treatment.—In attempting to reduce any dislocation, the first object is to release the head of the bone from its false position. And to accomplish this, the extension or pulling of the limb should always be made with the bone in the same line as that in which it must have been when the accident occurred.

A dislocation of the shoulder downwards is caused by a person throwing the arm out, and falling on the elbow when in this position, or by a horse pulling the rein and dragging the arm up towards the head when his rider has fallen to the ground.

In either case the arm had been out from the body when the

dislocation occurred ; and our first effort in reducing must be made with the limb in that position.

The easiest way to reduce a dislocation of the shoulder downwards is to lay the patient on his back on the carpet, and, having removed the boot from your left foot if the right arm is to be operated on, and from your right foot if the left shoulder is dislocated, to lie also on the carpet with your body nearly at a right angle with that of the patient, then to place your heel in the armpit of the patient, and, taking hold of his wrist, to pull the arm steadily out from the body.

As soon as the head of the bone is disengaged from its new position by this action, move your body gradually round to the body of the patient, keeping up the extension all the time and talking to the patient about some other matter to divert his attention, and consequently relax the muscles that oppose the reduction ; and in a little time you will feel the head of the bone receding from your heel into its socket.

To place the patient on a sofa or ottoman, the operator being seated on a chair opposite, is more suitable for ladies than on the carpet ; but the position of the operator is not so favourable, as his chair cannot be so easily moved to suit the necessary action in replacing the head of the bone.

This method suits admirably for recent cases, requiring little force ; but if the dislocation be of some standing, and the patient muscular, more force may be required, and the extension must be kept up, so as to weary the antagonistic muscles.

For this purpose the patient should get five grains of tartar emetic, dissolved in a tumblerful of tepid water, of which a tablespoonful should be given every ten minutes till nausea is produced. The patient should then be seated on a chair, and a folded sheet, placed under the arm, is to be carried over the shoulder blade and the chest to the top of the opposite shoulder, and, being tied there, should be held steadily by two men, or fastened to some holdfast on a level with the shoulder ; a towel or strong bandage should then be placed around the patient's wrist, from which extension should be made and kept up steadily.

At first the arm should be raised to a right angle with the body ; but as soon as the head of the bone is released from its false position the arm should be gradually lowered, the extension meanwhile being carefully sustained by the assistant, and the operator, by two hands in the armpit, should raise the head of the bone into its socket.

In some instances perseverance in making extension is required for a considerable time ; but violence is never necessary, nor should extension be made hastily nor by jerks, which irritate the muscles, and increase their opposition.

When the reduction is accomplished the arm should be supported by a handkerchief around the neck, and confined also to the side, for some days, till the ligaments heal, because until then the dislocation would be easily renewed.

If the dislocation be forwards, with the head of the bone under the clavicle or collar bone, then the extension should be made backwards, till the head of the bone is brought opposite the armpit ; and then the arm should be lowered and the reduction completed by two hands of the operator in the armpit, while extension is steadily kept up by the assistant, as in the former case.

DISLOCATION OF THE ELBOW JOINT.

This joint is generally dislocated backwards. It may be dislocated laterally or forwards, but either of these is of rare occurrence.

Dislocation of the elbow joint is caused by persons falling on the hand, by the shock of which the bone of the upper arm is driven forward upon the bones of the lower arm, and the injury is known by severe pain, by the arm being bent without the power of straightening it, and by the point of the elbow jutting out behind the bone of the upper arm, causing a pit or hollow above the point of the elbow, easily discerned by touch, and by comparing it with the opposite arm when bent.

Treatment.—This dislocation is easily reduced by placing the patient on a low seat, and then the operator, seated opposite, on the injured side, should put his knee in the hollow of the elbow-joint, and grasping the upper arm in one hand and the wrist in the other hand, he should press the knee firmly and steadily against the joint until the bones return to their proper position, and this is ascertained by straightening and bending the arm, which must be done with great caution, lest inflammation be increased or the dislocation renewed.

The joint can be straightened and bent safely by the operator putting the point of the elbow on the palm of his hand, and the thumb of the same hand in front of the bone of the upper arm, to prevent it moving forward, while with the other hand applied to the

wrist, he extends and flexes the arm gently, so as to be assured that the reduction is perfect.

This being done, the arm should be supported by a handkerchief around the neck, which should be fastened behind the elbow, so as to give it support and prevent it falling back.

The half bent position is the safest for this joint, because inflammation must follow the injury, and stiffness of joint is a too frequent consequence.

To prevent inflammation the patient should remain in bed for a week, with the elbow supported on a pillow, and the joint should be kept cool by the frequent application of a little Eau de Cologne and water, or still better, a little pounded ice in a bladder or bag of oiled silk.

When the inflammation has subsided, say at the expiration of six or eight days, the joint should be moved in the manner already described, very gently at first, and more freely by slow degrees, until perfect action is restored.

After a dislocation of the elbow joint the patient should have farinaceous food only, and his drink should be equally mild, while the bowels should be regulated by two grains of aloes and ten of salts, in syrup, taken at night, as required.

DISLOCATION OF THE WRIST JOINT.

This may occur by the bones of the wrist being carried back, and the bones of the arm forward, by a person falling on the hands.

By this injury we have two swellings, one caused by the projection of the bones of the wrist behind, and the other by the prominence of the bones of the arm in front. And this double swelling distinguishes a dislocation of the wrist from a sprain, as the latter causes swelling in front of the wrist only.

Treatment.—Dislocation of the wrist is easily reduced by pulling the hand, so as to make the necessary extension, the arm being held by an assistant while the operator pulls with one hand, and with the other pushes the wrist bones back to their proper place.

The arm should be supported in a sling around the neck, and an ointment of equal parts of sweet oil, hartshorn, and laudanum should be rubbed on the wrist night and morning, to soothe pain and prevent inflammation.

DISLOCATION OF THE HIP JOINT.

This joint may be dislocated in four different directions, according to the position of the limb when the injury is inflicted.

The thigh bone may be driven upwards and backwards on the ilium, or buttock; secondly, it may be forced upwards, in front of the bones of the pelvis; thirdly, it may be carried downwards and forwards; and fourthly, it may be pushed downwards and backwards.

The dislocation upwards and backwards on the ilium is the most frequent, and it is recognized by the limb being from one to two inches shorter than its fellow; by the position of the injured leg, being across the other; by the foot and knee being turned inwards; by the difficulty of raising the knee towards the body; and by the pain and impossibility of separating the knees from each other.

Some of these symptoms are also common to fracture of the neck of the thigh bone, by which the limb is shortened and the bone carried up on the ilium. But in fracture of the neck of the thigh bone the foot and knee are turned outwards; the knee can be more easily raised towards the body; and the limb can be more easily extended to its proper length, while it is quickly shortened again as soon as the extending force is withdrawn.

Treatment.—To reduce a dislocation of the thigh the patient, if robust, should get one grain of tartar emetic in solution every hour, until nausea is produced; he should be laid on his back on a table placed near a door-post, into which a holdfast can be secured; a folded sheet should then be introduced between the thighs, and being passed under the injured thigh, should be tied above the haunch bone, and then secured to the holdfast in the door-post, to steady the body and make counter-extension. But care must be taken lest this bandage should press on the privates so as to injure them.

A soft towel should now be tied around the leg, above the ankle, and extension made steadily in the line the limb now assumes, that is, across the opposite leg, until the head of the bone is drawn downwards and forwards to its natural position.

As soon as the head of the bone has descended from its false position and been brought opposite its cavity or socket, the limb should be gradually moved round in a line with the body, the extension meanwhile being steadily kept up; and then, by turning the foot and knee gently outwards, the head of the bone will enter, or can be pushed into its socket.

In this way, assisted by my friend, the late Dr. Robert Bryce, of Belfast, we reduced a dislocation of the thigh bone upwards and backwards, of three weeks' standing, without pulleys and without chloroform, which was not then known.

DISLOCATION OF THE THIGH BONE

downwards and forwards is next in frequency of occurrence, and the symptoms are just the opposite of the former. The limb is from one to two inches longer than its fellow, and the knees are separated from each other, while the body leans forward.

To reduce this dislocation, counter-extension having been secured by a folded sheet as above, the limb should be pulled out from the body, to release the head of the bone from its false position. When this has been accomplished, the limb should be moved round in a line with the body, and the toes and knee being turned a little in, the head of the bone should be allowed to go into its socket.

Other dislocations of this joint rarely occur.

After a dislocation of the hip joint, the patient should be confined to bed for three or four weeks; live very abstemiously; regulate the bowels by two grains of aloes and ten of salts in syrup, at night, as often as required; and have the joint frequently rubbed with equal parts of sweet oil, hartshorn, and laudanum.

DISLOCATION OF THE KNEE.

This joint may be dislocated forwards, or backwards, or to either side; but the surface is so extensive, that this accident seldom occurs.

Treatment.—To reduce a dislocation of the knee joint, it is only necessary to have extension made by an assistant, while the operator, by gentle pressure against his own knee, pushes the bone back to its proper place.

DISLOCATION OF THE ANKLE JOINT.

A dislocation inwards of this joint frequently occurs, and must always be accompanied, or rather preceded, by a fracture of the fibula, or small bone of the leg; because this bone on the outside extends below the joint, and must be broken before the large bone can be dislocated inwards.

When this dislocation occurs, the large bone is frequently forced through the integuments, causing what is termed a compound

dislocation, and an opening into the joint, with the additional complication of a fracture of the small bone.

Treatment.—If the accident is seen immediately, by making extension or pulling the foot the bone is easily reduced to its proper place ; but before attempting to do this, great care should be taken to remove any dust, blood, or foreign matter from the bone by bathing it with tepid water. If this be neglected, inflammation and suppuration to a large extent must be the most favourable result.

When the dislocation is not reduced soon after the accident, spasmodic contractions of the muscles of the calf of the leg drag the heel up, and may render it impossible to replace the bone without sawing off a portion of it ; and yet cases requiring this have often made a good recovery.

The ankle joint may also be dislocated outwards or forwards upon the foot, which latter dislocation is exceedingly difficult to reduce, and always requires the hand of a surgeon.

The dislocation inwards is the most frequent, and in treating it most practitioners prefer placing the leg on its outside, on a hollowed splint, with a foot-piece, the knee being tolerably bent, to relax the muscles on the calf of the leg.

The most successful cases under my care were those in which the leg was placed on three pillows bound together, the limb resting on the calf and heel, the patient lying on his back, and the knee considerably bent, to relax the muscles of the calf. In this position any discharge from the wound gets easy exit, and a few bandages over the leg and attached to the pillows keep the limb steady.

Any attempt to bring the edges of the wound together by sutures or adhesive plaster is always injurious, by causing irritation and inflammation of the joint. Water dressing, or a damp rag kept constantly over the wound, is the best application, and splints, or even bandages, should not be applied until the inflammation has subsided.

The constant attendance of a careful nurse to prevent displacement of the limb in such cases is indispensable, for if left alone, the patient by starting, or dreaming, might renew the dislocation, and blight the prospects of a favourable recovery ; whereas, under careful treatment, neither deformity nor lameness need ensue.

The food, after such accidents, should be entirely farinaceous, and tea, toast-, barley-, or rice-water, or rennet whey, the only drink, until inflammation has subsided.

As soon as inflammation ceases to threaten, beef- or mutton-tea,

with stale bread, should be given once a day for dinner, and afterwards a little solid animal food, if it does not prove too heating. And the bowels should be moderated by two grains of aloes and ten of Epsom salts in syrup, at night, as often as required ; but drastic purgatives, requiring the patient to move often, are not advisable.

As soon as discharge from the joint ceases, but not earlier, a bandage well put on is of great service ; but to apply a bandage properly to the foot or leg requires more dexterity than the amputation of a limb, and can be done only by an educated hand.

Splints, to be useful, require to be well padded, and to fit accurately. Strong pasteboard softened in hot water, and applied in that state to the limb, takes the exact form, and when dry makes a very good splint, when supported by a bandage, but should not be applied till the wound has healed.

Much care is requisite in attempting to exercise the joint at first, and still more in throwing the weight of the body on it, before it is perfectly recovered. Hasty attempts to walk may renew the inflammation, and cause permanent lameness.

Crutches should be used until the joint regains its former strength.

SPRAINS OF THE ANKLE JOINT.

These injuries often simulate dislocations, for when the ligaments are overstretched or ruptured, effusion and swelling set in so suddenly that it is often difficult to discriminate. By touching the joint steadily and firmly we obtain the best information. If it be a dislocation, we feel the end of the bone hard and firm, while the swelling caused by a sprain is soft and yielding.

When the wrist is dislocated we feel the projection of the bones of the arm forward, and the prominence caused by the bones of the wrist backwards ; but when the wrist is sprained we have the swelling in front only.

Sprains are very tedious in healing, and premature attempts to use the joint renew the injury, and retard improvement.

Treatment.—Absolute rest for the joint is indispensable, and to keep it well elevated is also necessary. If the injury has been severe and the pain acute, leeches should be applied around the joint, from six to twelve, in proportion to the amount of inflammation and the strength of the patient ; and the bleeding should be encouraged by hot fomentations.

In some cases the application of cold, by damp cloths frequently

renewed, has a good effect in preventing effusion and inflammation, while in others cold increases the pain, and does not suit. When cold does not answer, a liniment of equal parts of oil, hartshorn and laudanum, poured on a piece of flannel wrung out of hot water, is very serviceable, and alleviates pain.

This should be applied lightly around the joint, and repeated every eight hours; but any tight bandage applied early to a sprain does much injury, and increases the inflammation.

After the pain and inflammation have subsided, a plaster of the iodide-of-lead salve, made with two drachms of the iodide to an ounce of rendered suet, spread on soft leather, and placed around the joint, disperses the swelling and tends much to hasten the recovery. In the absence of this, friction with spirit or oil of turpentine, night and morning, is serviceable.

It is well to repeat, however, the necessity for caution in attempting to exercise any sprained joint; nor is it possible to fix any certain time at which this may be done in all cases, as much depends on the state of the constitution, and the extent of injury done to the ligaments.

A slight sprain, in a good constitution, might be perfectly recovered in two weeks, while the same injury in a different constitution would not be repaired in as many months, and in some constitutions might induce permanent disease of the joint.

FRACTURES OF BONES.

SUCH accidents are of frequent occurrence, and we shall notice a few of the most common.

A fracture is called simple when the bone is broken without any wound in the skin.

It is called compound when the broken end of the bone is forced through the skin.

And it is called comminuted when the bone is shattered, or broken into more than two pieces.

A fracture is termed transverse when the bone is broken straight across. But it is called oblique when the fracture passes in a slanting direction from below upwards.

Displacement of the bone is a common consequence of fracture, and this is the chief reason of the difficulty in treating it, because the ends of the fractured bone will soon unite if they can be kept perfectly

adapted to each other, provided the constitution is in a healthy state.

The resources of nature for the repair of bones are just as ample as for the healing of a wound, and require no white of egg, nor other glutinous substance, applied externally, as was formerly imagined necessary for a perfect union.

All that art requires to do is to place the bones in their natural position, and retain them so; and the less pressure that is necessary for this purpose, the recovery will be the more favourable.

Displacement of the fractured bone is produced principally by contraction of the muscles, dragging the lower portion of the bone upwards.

In a transverse fracture, when the bone is once replaced in its proper position, it is easily retained there, because, when the muscles draw the lower part of the bone up, it impinges against a solid substance of equal extent, which arrests its progress, and prevents displacement.

If the fracture is, however, oblique, it may be easily reduced to its proper position; but displacement is always prone to recur, because the lower portion of the bone, being placed against a slanting surface, is easily drawn upwards again by the action of the muscles.

When any of the long bones, especially the thigh, are fractured, the tendency of the muscles to contract is very great, so that the bones often overlap each other to the extent of three or four inches.

This contraction of the muscles must be prevented, by adopting means to keep the lower portion of the fractured bone drawn down to its proper position, which is called counter-extension, and is absolutely necessary to prevent shortening of the limb, and deformity for life.

But some bones are so situated that they cannot overlap, such as the skull and the ribs.

FRACTURES OF THE SKULL.

This bone may be broken by blows inflicted on the head, or by falling on any hard substance.

When this bone is fractured by such means it is generally driven in upon the brain, causing compression of this vital organ, followed by paralysis, and if not relieved, by consequent death.

Treatment.—When the skull is depressed upon the brain, a small portion of the sound part of the bone, beside the fracture, is

removed by a circular saw, and a lever is introduced under the depressed portion, which is then elevated to its proper position ; and this is called trepanning the skull.

But all depressions of the skull do not require this operation, because the skull is formed of two plates, with a cancellated structure between them, and the outer plate may be pressed down upon this yielding structure, so as to make the depression sensible to the touch externally, while the inner plate is not depressed, and the brain suffering no injury.

Trepanning the skull should, therefore, never be had recourse to, unless symptoms of compression of the brain, as coma, insensibility, or paralysis, supervene.

FRACTURE OF THE BONES OF THE NOSE.

Fracture of these bones, commonly called the bridge of the nose, causes great and unnecessary deformity.

In Australia, where horses in the interior of the country are seldom trained, but put into harness in their wild state, I have seen men who were sadly disfigured by having been kicked by horses on the nose, and not attended to afterwards.

Treatment.—Such fractures are easily replaced at the time, or shortly afterwards, by introducing a pencil, or any small round and firm substance into the nostril, to press the bones out to their proper place, while a finger applied externally guides the amount of pressure that is necessary to replace the bone.

The loss of blood on such occasions is no doubt calculated to deter the uninitiated from interfering ; but it should not, for to replace the bone is the most effectual way to stop the bleeding, which is kept up by the rough edges of the fractured bones, irritating the mucous membrane ; and a damp rag, constantly applied over the nose, after the bone is replaced, is all that is required.

FRACTURE OF THE UNDER JAW.

This injury may occur by blows inflicted on the jaw, and it is recognized by pain in the part, by some of the teeth being lower than their fellows, and by the person being unable to use the jaw.

Treatment.—This bone is easily returned to its proper position, by pressing with the right hand below the jaw, while the fingers of the

left hand, in the mouth, ascertain the equality of the teeth, and adjust the fracture on the inside.

To retain the fracture in its position, a piece of pasteboard, wet with hot water, should be applied under the jaw, and held steadily by the hand, until it is perfectly dry, when it assumes the exact form of the jaw, and makes an excellent splint to give support till union takes place.

A broad bandage, divided at each end, to form two tails, should be placed under the paper splint, and bound over the head, sufficiently tight to press the teeth of the under against those of the upper jaw, and keep the bone steadily fixed, until the fracture is perfectly united and strong.

The patient, meanwhile, must be supported by fluid food, as milk, beef- or mutton-tea, chicken broth, thin gruel, and soup. An absent tooth, in most cases, enables the patient to take food by a quill or small tube; and when the teeth have been perfect, a front tooth has been extracted for that purpose; but this should not be necessary, as a curved tube can be introduced at the vacancy on either side behind the wisdom teeth, through which food can be conveyed into the stomach. Should the bandages render this passage inconvenient, a tube can be introduced by either nostril for this purpose.

FRACTURE OF THE CLAVICLE, OR COLLAR BONE.

This bone is very subject to be broken by persons falling on the shoulder; the point of the shoulder being driven forward towards the chest, and causing the collar bone to yield about its centre.

This fracture is early recognized by the shoulder drooping on that side, and the person being unable to raise the arm without considerable pain.

The ends of the collar bone, where fractured, invariably overlap, and too often are united in that position, causing a tumour at the seat of the fracture, a rounding of the shoulders, a contraction of the chest, and inequality in the elevation of the shoulders, which in the female figure would cause considerable deformity, but, fortunately, females are seldom afflicted with this injury.

The weight of the arm carries the point of the fracture next the shoulder down, so that it is overridden by the end of the bone next the chest, which peculiarity requires attention.

Treatment.—This bone is easily reduced to its proper position, by placing one hand in the axilla or armpit, to raise the shoulder up,

while with the other hand the elbow is pressed to the patient's side. This "sets" the fracture, and to retain it so, a large oblong pad, such as a pincushion, should be put in the axilla, to bear the shoulder up and outwards, while the elbow is pressed against the side by a bandage over it and around the body.

In addition to this, a bandage should be attached to both ends of the cushion in the axilla, and joined on the top of the shoulder behind, from which it should be carried across the back, and attached to a bandage passed around the opposite shoulder, so as to keep the shoulders back.

During treatment the patient should lie on his back, and, to avoid nightmare, he should rest on an inclined plane.

Small bones, if favourably placed, soon unite, and in three weeks a fractured clavicle may be perfectly recovered; but if the bone overlaps, or the healing process be interrupted by too much motion of the bone, union may not be perfected in less than two months. Perfect rest and good patience hasten the recovery.

FRACTURE OF THE RIBS.

The ribs may be broken by a fall or a blow, or by the pressure of a heavy weight falling on them.

This injury is recognized by pain at the seat of fracture, which occurs generally about the centre of the bone; and by the grating noise of the fractured ends of the bone rubbing against each other, in the act of breathing.

The ribs, when fractured, cannot overlap; but one end of the rib may be pressed inwards, so as to irritate or wound the pleura, or lining membrane.

Treatment.—To favour the union of the fractured bones, it is necessary to limit the action of the ribs in breathing, by applying a bandage around the chest, as tight as it can conveniently be borne; and thus obliging the diaphragm to act for the ribs until they unite.

The patient should eat farinaceous food only, and abstain from all stimulants, lest inflammation ensue; and if cough supervene, it should be soothed by six, eight, or ten grains of Dover's powder, given at night; while the bowels are acted on by half an ounce of Epsom salts in a cup of ginger-tea next day.

FRACTURE OF THE UPPER BONE OF THE ARM.

This bone, which is technically called the humerus, is frequently broken, either at its centre or upper third. And the symptoms are swelling and pain in the seat of the fracture; inability to use the arm; and the grating sound, caused by friction of the broken ends against each other.

In certain states of the constitution, which in other respects may appear perfectly healthy, bony matter is not thrown out, and fractures will not unite; and two cases of this kind seen by me, one in hospital, and the other in private practice, were fractures of the upper arm.

Treatment.—When replacing or “setting” a fracture of any of the long bones, the limb should always be extended to its full length by pulling it gently and steadily, before any attempt is made to press the bone into its position; because, by attempting to push the bone into its place before full extension is made, a portion of muscle, or other sensitive part, may be included between the fractured ends of the bone, causing excruciating pain, and also preventing the broken surfaces from coming into immediate contact. Whereas, by making gentle, but necessary extension, all the surrounding parts are liberated; and then the action of the muscles is generally sufficient to place the bone in its proper position. Should it fail to do so, pressure ought to be made with the hand over the seat of fracture, while the extension is steadily kept up by an assistant; and neglect of this rule may cause much suffering to the patient.

As we observed already, if the fracture be transverse, there is little danger of displacement; but when the fracture is oblique, the action of the muscles is apt to draw the bone up, to some extent.

The fracture being replaced, and held in apposition by an assistant, the arm should be bent comfortably at the elbow, and a bandage applied from the fingers to the elbow, to prevent the lower arm from swelling by the pressure of the splints, necessary to support the fracture.

Some would continue the bandage to the top of the shoulder, but to me it seems greatly preferable to have no bandage on the fractured bone; but to keep it supported only by properly padded splints, which are easily changed or removed; so that displacement in the fracture can be noticed and corrected during the process of healing.

Splints should now be applied to the fractured bone, and they should be long enough to extend from joint to joint, as short splints never give sufficient or steady support.

The best kind of splints for the upper arm are made of pieces of light wood of sufficient length, in narrow strips, glued on soft leather. These fold round the arm, and accommodate its form, while the width is easily reduced to suit the size.

In the absence of these, two pieces of strong pasteboard of the proper length, wet with hot water, and held on the arm until they are dry, assume the exact form, and make good splints.

Should none of these be at hand, three pieces of light wood, one placed on each side of the arm, and one behind, should be substituted. And all splints should be well padded with opened wadding, because any abrasion of the skin is very annoying to the patient, and complicates the treatment of the case.

The splints should be supported by straps of broad tape, placed at short distances from each other; and buckles are greatly preferable to knots or any other fastening. The splints should not overlap, and as the limb is swollen at first, they often require to be reduced in width, to allow the straps to be tightened sufficiently, to support the fracture.

The application of the straps or circular bandages is an important part of the treatment; for if they be too tight, the circulation of the blood may be impeded, and mortification induced; and if they be tighter above than below, the venous blood will be prevented from returning to the heart, much unnecessary pain and swelling of the lower arm will be produced, and the healing process retarded.

The splints should give a feeling of support, but they should not press so as to cause pain, or much discomfort. And any judicious person, by touching the straps, can judge of the extent of tightness, as also the equality of pressure on different parts.

In addition to these points, it is necessary to pay attention to the subsidence of the swelling in the fractured limb, and to tighten the straps occasionally, so as to keep up the necessary support of the fractured part.

When the splints have been properly applied, the arm should be supported in a sling around the neck; and the upper arm should be confined to the body, by a bandage placed around the body, and the arm above the elbow. The patient should be confined to bed for two weeks at least, and lie on the back or sound side.

The diet at first should be very mild, chiefly farinaceous; and all stimulants should be prohibited. The bowels should be moderated by two grains of aloes and ten grains of Epsom salts, given in syrup, at night, as often as required.

After the second week, light animal food once a day for dinner is admissible; but gross feeding, before the patient is able to take exercise, is never profitable nor judicious.

If the fracture seems to be doing well it should not be disturbed; but if there be any doubt about its position, or if the patient feels uncomfortable, the splints should be carefully removed, and the fracture examined, by touching gently and steadily around it, so as to correct any displacement that may exist.

It is true that rough awkward handling might renew a fracture at any time before the union is consolidated; but with care a fracture may be examined safely at intervals; and advantage often results from slightly altering the splints, and thereby relieving a part that is suffering from the pressure.

The period for leaving off the splints or artificial support, cannot be determined beforehand; because in some cases union will be as perfect in four weeks, as it may be in others after two months. The state of the union must be ascertained by trying very carefully whether or not the fracture bends or yields when the arm is moved gently, and if it does the splints must be continued; but if the fractured part feels firm, and the patient can bear the arm to be moved without suffering pain, splints may be discarded.

The patient should now begin to extend the arm and exercise the elbow joint occasionally; but the arm should be supported in a sling, and used with great caution, until it is perfectly strong.

FRACTURE OF THE LOWER END OF THE HUMERUS.

This fracture of the lower end of the upper bone of the arm, called the humerus, is a very severe accident, and very difficult to treat.

By a fall on the elbow, the condyles or round surfaces on the lower end of the humerus, which assist in forming the elbow joint, are broken off, and generally separated from each other, one being carried backwards, while the other is dislocated forwards on the bone of the forearm; or both condyles may be broken and carried backwards.

This injury causes a fracture into the elbow joint, together with a

dislocation ; and is not easily distinguished from a simple dislocation of the elbow joint.

The bent position of the arm after the accident is similar, and there is equal pain on attempting to move the joint ; but the fracture is easily recognized by the facility with which the displacement recurs after being reduced. For, in a few minutes after you cease to extend the forearm, the fractured portion of bone is again drawn back ; which distinguishes this injury from simple dislocation of the elbow joint.

This fracture is easily replaced by the operator putting his knee against the bend of the elbow, and pulling the arm by the wrist until the bone returns to its position. But the injury done to the joint by the rupture of ligaments and effusion into it, is generally followed by active inflammation, forbidding the use of bandages, and requiring the constant application of cold lotions ; for which purpose water with a little ice kept in it, and applied frequently by damp rags, does very well.

To retain the fracture in position, without the aid of a bandage, is a difficulty which renders this a most troublesome case to manage ; and requires the patient to be confined to bed during the inflammatory stage.

A hollow splint or rest, long enough to extend from six inches above the elbow to the hand, and made of zinc or thin copper, which will bend sufficiently at the elbow and curve round either side to keep the arm steady, suits best while the joint is inflamed. And three holes pierced through both sides of the rest, one above the elbow, and two towards the hand, allow the rest to be supported by broad tapes around the neck ; and by keeping the hand sufficiently elevated, the weight of the arm is thrown back upon the upper bone or humerus, so as to keep the fractured parts tolerably in apposition.

As soon as the inflammation subsides, a bandage should be applied to keep the fractured bones closely adapted ; but with patients of a scrofulous habit the inflammation is often so severe, and so permanent, that bandaging is inadmissible until the period for its usefulness has expired, and the union of the fracture has been consolidated.

In such cases stiffness of joint, called ankylosis, is apt to ensue, and reflect unmerited reproach on the medical attendant. For had he applied bandages at first, mortification would likely have been the result ; and by bandaging even at a later period, chronic disease of the joint must have been inflicted.

To ensure the useful action of any joint, even after a dislocation,

and still more so after a fracture, gentle motion of the joint should be commenced, at one, two, or, at most, three weeks after the accident ; but, with scrofulous patients, inflammation may render it hazardous to begin to move the joint before the expiration of six weeks, or perhaps two months.

But by constant attention and perseverance in making gradual motion of the joint, useful action may be obtained, even at this late period ; and should slight stiffness remain, it is preferable to a diseased joint or wooden arm.

As the amount of inflammation after any injury is greatly influenced by the state of the stomach, after this accident the food should be entirely farinaceous, and the drink equally mild, the bowels being kept open by two grains of aloes and ten of salts, at night, when required.

FRACTURE OF THE FOREARM.

This accident is of frequent occurrence, and is generally caused by falling on the hand.

The forearm being formed of two bones, the radius, or upper bone, and the ulna, or under bone, either or both may be broken ; but when one only is broken, it is generally the radius, or upper bone.

If only one of the bones is broken, there can be no displacement, because the two bones are attached to each other by a continuous membrane ; and when both are broken the displacement is not very conspicuous. But the fracture is easily discovered by the swelling and pain in the part, by inability to use the arm, and by the grating sound, heard from the friction of one end of the bone against the other when the bone is moved.

Treatment.—To replace this fracture, as well as that of every long bone, the first step is to extend the limb by pulling the wrist, while an assistant steadies the upper arm, and then a hand applied over the seat of fracture can easily press the fractured portions into proper position.

Two flat splints cushioned with opened wadding, and long enough to extend from the elbow to the hand, should now be placed, one on the front and the other on the back of the arm, and supported by buckled tapes, sufficiently tight to keep the fractured bones in coaptation.

A bandage or roller applied to the fractured limb looks more artistic, but it does no good, and often conceals from view errors that,

if seen, would be corrected ; and consequently in my practice I never applied a roller over the fractured bone. In fractures of the upper arm and thigh, a roller is required on the forearm, leg, and foot, to prevent swelling of the lower limb ; but for any other purpose they are useless.

This injury is not so severe as to require the patient to be confined to bed. It is sufficient to place the arm in a sling around the neck, with the palm of the hand towards the chest, during the day ; but as some cannot sleep comfortably with the arm in this position, it is generally preferable to place it on a pillow at night.

In four weeks fractures of the forearm may be united, but splints should not be discontinued until the patient can use the arm without feeling it bend or yield ; and after the splints are taken off, the arm should be supported for another week in the sling.

FRACTURE OF THE RADIUS AT THE WRIST.

The upper bone of the forearm is frequently broken close to the wrist, and simulates a dislocation or sprain of this joint, which is apt to deceive.

When this injury is neglected, the radius falls down on the ulna, or lower bone, which becomes curved or bent downwards by a weight it cannot support ; the recovery is tardy and imperfect, the joint remains weak for life, and the arm is crooked and disfigured for life.

Treatment.—To support the radius in its proper place, two round, firm rolls of calico or surgeon's lint, about six inches long, and one-fourth inch in diameter, should be placed, one in front, and the other behind the arm, so as to press in between the bones, and keep the radius up to its proper position ; and these rolls should be supported by two flat splints, bound on by buckled straps around the arm.

The arm should be supported in a sling, with the palm of the hand towards the chest, and the splints should not be left off till the union is consolidated.

FRACTURE OF THE THIGH BONE.

This is a serious injury, which is always followed by shortening of the limb and deformity, unless special care be taken to prevent these.

In this, as in fracture of all the long bones, the muscles draw the

lower end of the fracture up, so that the bones frequently override each other from one to three inches, which can be prevented only by continued extension of the limb.

A fracture of the thigh is distinguished by pain and swelling in the part, by shortening of the limb, by inability to use it, and by the grating sound, caused by the friction of one end of the fracture upon the other when the bone is moved.

With this fracture especially no time should be lost in replacing the bone in its proper position, because the rugged ends of the fractured bone irritate the surrounding muscles, excite spasmodic action of these, and thereby increase the difficulty of adjusting the fracture, in proportion to the delay or interval that may occur.

Treatment.—It is not advisable to await the preparation of splints or other requisites. On the contrary, extension of the limb should at once be made, and the fractured bones being placed in coaptation, an assistant should keep up the extension, and steady the limb, till the necessary support can be applied.

A suitable bed is of incalculable importance in the treatment of fractures of the thigh, and also of the leg, and as we are all subject to such accidents, every family should be supplied with a fracture bed.

The great advantage of this bed is, that by a valve underneath it the wants of the patient can be attended to, and the bowels relieved, without disturbing or displacing the fracture. The additional expense is trifling ; it is equally useful as any other bed, and, should it never be required for this special purpose, it occupies no more room, and is equally handsome as an article of furniture, while its good offices, in case of necessity for its use, cannot be over-rated.

A good hair mattress is preferable to feathers for the patient to lie on, taking care that the surface be free from ridges or inequalities, which are particularly calculated to displace the fracture, and after lying in the same position for four weeks, or perhaps longer, are apt to produce troublesome bedsores, caused by pressure.

To prevent swelling of the foot, ankle, and knee, a bandage or roller should be applied from the toes, above the knee, and this requires to be done accurately, so as to give equal support to the lower limb. But the fractured bone is best left uncovered, so as to be easily examined.

The eighteen-tailed bandage, applied by an expert, looks very artistic, but can do no good, and may injure by concealing errors.

The straight extended position of the limb is preferable to any

other, and the only one that enables us to keep up sufficient extension to prevent overlapping of the bones in oblique fractures.

To make the necessary extension, there should be a long splint of strong board for the outside of the limb, extending six inches above the haunch bone, and as many below the foot, with a hole at the bottom and top to admit the extending bandages. This splint should be equal to the thigh in depth—say eight inches at the top, and tapering to about four inches at the bottom, or foot part.

The splint for the inside should be of equal depth, but only the length of the limb, and it requires no holes for bandages.

A silk handkerchief with a roll of wadding folded in its centre, passed from the inside around the top of the thigh, should be securely tied to the top of the long splint, drawn down at first, and afterwards pushed up, so as to make the necessary extension—which is termed counter-extension; and care should be taken that the handkerchief does not press too much on the privates.

A strong bandage of double calico securely stitched around the ankle, with a lateral bandage on either side firmly stitched to the circular bandage, enables us to draw the limb down to its proper length by the lateral bandages, which being fastened to the lower end of the splint, keep up the extension thus made.

These splints require to be padded, and for this purpose, a long cushion filled with bran, and of equal breadth with the splints, should be placed between the splints and the limb; but before the limb is finally bound up, it is well to allow the bandages a few minutes to stretch, and then to measure the limb accurately, by a tape or graduated line.

To place the two limbs together might deceive us, as the injured side always leans down. A mark should be made with ink on the front bone of the pelvis on both sides, at the top of each thigh; and the measure taken from these marks to the inner ankle bone of both legs. And if correct, or sufficiently extended, the broken limb should measure two-eighths of an inch more than its fellow, owing to the extension of the ankle and of the knee joints.

The length of limb being satisfactory, and the splints and cushions arranged, the whole should be bound round with boot-tape and strong buckles, or with strong calico bandages, three for the thigh and two for the leg.

These circular straps or bandages should be drawn sufficiently tight to give a feeling of support to the limb, and to keep the fractured ends of the bone closely pressed together; but they should

not be so tight as to cause irritation, or prevent the free circulation of the blood ; and their pressure should be equal at all points.

As the swelling subsides, and the muscles begin to waste from inaction, the bandages get slack, and require to be attended to, and tightened occasionally.

In some cases the upper end of the fractured bone has a tendency to jut out on the front of the thigh ; and this requires a narrow splint covered with opened wadding to be placed between the side splints, to press the bone down to its proper level. And it is necessary to see that the limb is properly placed, and that the foot and knee do not lean too much to either side, especially outwards.

We stated that no time should be lost in replacing a fractured bone ; but this rule applies only to accidents that are seen before much swelling and inflammation have set in.

If the limb is swollen and inflamed, any attempt to replace the fracture would be both injudicious and unsuccessful ; because the inflamed muscles would not yield to allow the necessary extension to be made without violence, and the pressure of splints on the inflamed part would be highly injurious, and might cause mortification and loss of the limb. Leeches and cold lotions should be applied, repeated, and continued until the inflammation subsides, before any attempt is made to replace the bone. Nor need we despair of a favourable union although some days may intervene before the fracture can be replaced. Of this I shall mention an instance.

In 1835 I was called to a dispensary patient, who had his thigh broken by a savage bull, which fortunately had no horns, butting him against a wall. As some ten or twelve hours had elapsed before I saw the patient, the thigh was very much swollen and inflamed, and being a servant and badly attended, he did not improve quickly ; so that I was attending him for nine days, before the bone could be replaced or splints applied.

The shortening of the limb in his case was fully two inches, so that the extension required considerable force ; but he was very patient, and although aged, about sixty-five, the union was perfect in six weeks from the time the accident occurred, and the limb of the natural length.

The speedy and perfect union of any fracture is influenced very much by freedom from motion and disturbance, during the healing, natural process.

If a fracture-bed be available, the accommodation of the valve under it affords an incalculable advantage. By its aid the bowels

can be relieved without injury to the fracture; but in absence of it, the want must be supplied by the use of a bedpan, of which the metallic is preferable, as being less subject to accidents.

The dread of disturbing the fracture causes patients too often to neglect the state of the bowels, and thereby induce a deranged state of the constitution unfavourable to the formation of bone.

The bowels should, therefore, be regulated by two grains of aloes and ten grains of salts, given in syrup at night, as often as required.

The food of patients suffering from fracture of the thigh should be farinaceous for the first two weeks, till inflammation disappears, and after that, light animal food can be used once a day for dinner. Water, rennet whey, or apple tea, is the best drink; nor should stimulants be indulged in. After the third week half a grain of quinine after breakfast and dinner has a good effect as a tonic, or, if preferred, a wineglassful of infusion of chiretta or quassia after meals.

If the patient feels comfortable, the limb being of the proper length, and the appearance of the fracture satisfactory, curiosity should never tempt us to meddle with it. If, on the contrary, the patient complains of constant pain, or any displacement seems to have taken place, we should not hesitate to undo the bandages; and while an assistant keeps up the extension, look for the cause of pain, or correct any error that has occurred.

When the patient is lusty, the skin at the groin is apt to be abraded by the pressure of the silk handkerchief. As soon as this is noticed, it should be prevented by dropping on the irritated surface, night and morning, equal parts of tincture of catechu and laudanum: and the same application suits bedsores, which should be guarded against by great attention to cleanliness.

An ankle joint, weak from injury or other cause, may not be able to bear the necessary extension, as directed, from the ankle; and in such cases we should apply three or four narrow strips of adhesive plaster from the knee down each side of the leg, and, making extension by these, tie them to the bottom of the splint.

Patients are always over-anxious to get out of bed, confinement to which proves irksome, but hasty attempts to do so often retard recovery.

If the case has gone on favourably, at the end of the fourth week the splints may be removed, and trial made of the firmness of the union. If the limb can be moved without bending or yielding at the fractured part, or if the patient can move the limb without

assistance, the splints may be discontinued; but the patient should remain in bed for a few days without the splints, until he can turn and lie on the sound side without feeling pain.

If, on the contrary, the fracture yields when the limb is moved, the splints must be readjusted and retained for two weeks longer, when a second trial can be made.

As soon as the fracture is sufficiently united and consolidated, crutches of suitable length should be provided, taking care that the arm-rests be well cushioned, and that each crutch have a short spike in it to prevent slipping on the carpet or floor. And no patient should attempt to use crutches for the first time without an assistant being present to support him, should he feel giddy. He should also be satisfied with short journeys for a few days, and lie down when tired rather than attempt to sit.

The fracture generally aches at first, when stretched by the weight of the limb, and it is customary, therefore, to put a long strap under the foot and around the neck. But many well-united fractures have been broken by this expedient, because when a crutch threatens to slip, the patient instinctively draws the body up, and this movement acting on the strap under the foot, renews the fracture.

It is much safer to relieve the feeling of weariness in the fracture by frequent rests, and to be satisfied to wait on the natural recovery of perfect strength in the injured limb.

Until the callus thrown out around the fracture is perfectly absorbed, the muscles of the thigh act with difficulty, and slight lameness is the natural consequence; but if the limb be the proper length, the patient need not be discouraged, for this lameness is transient, and would not remain if he wished it.

FRACTURE OF THE NECK OF THE THIGH BONE.

This accident is peculiar to an advanced old age, when the bones have become unusually brittle.

It may be caused by a fall on the haunch, on the knee, or the sole of the foot; and in this way it has occurred to persons slipping off the kerbstone, when walking on the street.

If the fracture be situated within the capsular ligament of the joint, the displacement is trifling, and the injury simulates a contusion of the muscles on the hip, from which it is distinguished by inability to use the limb for weeks or months.

But if the fracture occurs outside the capsular ligament, the limb

is shortened from one inch to two and a half inches, and simulates a dislocation of the hip joint upwards and outwards. From this it is distinguished, however, by the facility with which the foot can be rotated outwards, by the increased pain caused by rotating the foot inwards, and by the readiness by which the knee bends towards the body. Still, the most marked symptom of this fracture is the ease with which the limb can be extended to its proper length, and the haste in which it is retracted to its former position as soon as the extension ceases, or is taken off.

It is an exceedingly difficult fracture to treat, owing to the difficulty of keeping the fractured ends of the bone in perfect coaptation. Union is seldom obtained, and without the aid of a fracture-bed can scarcely be hoped for.

Treatment.—The same splints, padding, and circular bandages are required for this as those directed for fracture of the thigh, with the addition of a strap or bandage around the haunch and the top of the long splint, so as to press the fractured ends of the bone firmly together. Similar attention is required in every other respect; but union need not be expected sooner than at the expiration of six weeks or two months.

FRACTURE OF THE PATELLA, OR KNEE LID.

The knee-cap may be fractured by a fall on the knee, or by contraction of the muscles on the front of the thigh, as when a person in danger of falling backwards makes a powerful effort to bring the body forwards. It has been broken, also, by a person attempting to kick, and missing his aim.

The injury is easily ascertained, by inability to use the limb, and by the separation between the broken ends of the bone. The distance to which the ends of the bone may be separated varies in proportion to the violence by which it was affected, and may extend from one inch to three or four inches.

The spasmodic action of the muscles on the front of the thigh constitutes the great difficulty in the management of this fracture.

Treatment.—To lessen the opposition of the muscles on the front of the thigh, the patient should be placed in bed in a sitting position, supported by a bed-chair, so as to relax the muscles of the thigh, the upper portion of the patella should then be seized by the right hand, while the muscles are steadily pressed down with the left hand, until the ends of the fractured bone are made to approximate.

To retain the fracture in this position, a strong leather strap, well

padded, should be placed around the thigh above the knee, and a similar strap around the leg below the knee, the latter being furnished with two side-straps, to suit buckles placed on each side of the thigh strap, by which the circular straps can be bound together and tightened at will.

It is not advisable to be too hasty in applying these straps, as it generally takes some time to overcome the spasmodic action of the muscles, and more is gained by pressing the patella and muscles down with the hands than by dragging them up with straps. The straps are chiefly useful for retaining the conquest gained over the muscles by the hands.

If the patient be robust, one grain of tartar emetic, in water, every ten minutes, to cause nausea, facilitates the reduction ; but with nervous, irritable constitutions, an opiate is more soothing.

Some practitioners do not apply a circular strap below the knee, but use a long strap that passes under the sole of the foot, and is buckled to each side of the thigh strap. But as long straps are more likely to yield, and less secure than short ones, this plan is not eligible unless the patient has got varicose veins in the legs, which render the circular straps objectionable. In such a case, the long strap under the foot is preferable, but it requires constant attention.

Union of the patella is always slow, and no attempt to bend the knee should be made before eight or ten weeks, when it may be tried with caution.

When the ends of the patella have been much separated, it is sometimes impossible to bring them into immediate contact, and a ligamentous union is all that can be obtained. The action of the muscles on the thigh, inserted into the patella, is thereby rendered imperfect, and must be improved by practice, which, after some time, accustoms the muscles to act under their altered circumstances, and to overcome the difficulty.

FRACTURE OF THE BONES OF THE LEG.

The leg, like the forearm, is formed with two bones, which may be broken by a person falling on the feet, or by a weight falling on the leg, and one or both bones may be fractured.

If one bone only be fractured, the displacement is very trifling, so that it is sometimes difficult to ascertain the injury, because the second bone prevents the leg bending at the seat of the fracture, and deprives us of the opportunity of hearing the grating sound caused by

one end of the fracture rubbing against the other. But pain in the part, and inability to use the leg, betray the fracture, and enable us to decide as to the nature of the accident.

Fracture of the leg occurs most frequently about its centre, and both bones are generally broken ; but the seat of fracture may be near the knee, or down near the ankle joint.

If the fracture be oblique or slanting, and both bones broken, the displacement is generally considerable ; but when the fracture is transverse, the displacement may be trifling.

When replacing or setting the bone, the rule of making previous extension of the limb must not be forgotten. By pulling the limb to its proper length, the surrounding parts are set at liberty, but by attempting to push the fractured ends of a bone into its place, without making extension, we may include a portion of muscle, or other sensitive part, that may have got entangled, and thereby cause great suffering to the patient, while the ends of the fracture are prevented from getting into immediate contact.

The position in which the leg rests on the calf and heel, is preferable to placing it on the side ; but the leg should be elevated, and the knee bent, to relax the muscles of the calf.

Two splints are required for a fracture of the leg ; one on the outside, with a footpiece attached to it, and one for the inside, to extend from the knee to below the inner ankle. They are made of wood or caoutchouc, and each should have a hole at the bottom, to accommodate the projections of the ankle joint.

In the absence of prepared splints, strong pasteboard, cut the proper length and size, if wet with hot water, and allowed to dry on the limb, assumes the exact form, and makes a good substitute for splints.

If the fracture be transverse, splints may be dispensed with, but we should never omit their use from choice. When practising in Sydney, in 1846, I was called to a lady who had her leg fractured by a fall from a gig. It was a transverse fracture of the right leg, about four inches above the ankle. As a mother she was an excellent patient, and bore pain admirably, but the idea of suffering pain was too much for her nervous system, and the sight of the splints for her leg brought on a fit of hysteria, that could not be overcome, until I promised to treat her fracture without splints ; nor would she have a Liston's leg-rest that I had taken for her.

To suit the emergency, I got three pillows stitched firmly together, the upper one being down, and the centre of this, the upper one,

being well hollowed, the leg was placed on it ; two tapes being passed under the pillows, and tied over the leg, together with a ribbon around the foot and attached to the pillows, to keep the foot steady ; while the elevation of the pillows allowed the knee to bend sufficiently to relax the muscles of the calf.

A couple of nurses sat alternately by her bedside for the two first weeks to guard against accident by starting or dreaming, and in four weeks the union was perfect, without the slightest deformity or lameness.

In oblique fracture the pressure of splints is necessary to keep the fractured bones in apposition ; and Liston's leg-rest increases the comfort of the patient, and adds to his security. If with these we could have a fracture bed, a good union might be ensured in any case.

When placing a fractured leg, the rule is that the great toe shall be in a straight line with the inside of the patella or knee cap ; but this rule is not perfect, for tight boots often distort the great toe from its natural position, and in such cases we must be guided by the form and position of the sound limb.

Crutches, as directed for fracture of the thigh, should be used for some time also after fracture of the leg, until the union is perfectly consolidated, and the fracture is sufficiently strong to bear the weight of the body.

COMPOUND FRACTURE OF THE LEG.

To constitute a compound fracture, the broken end of the bone must pass through the skin, forming an external wound communicating with the fracture. This is always a serious complication, and when the fracture occurs near the ankle joint, the spasmodic contraction of the muscles on the back of the leg may render it impossible to replace the bones without shortening them.

In 1853, while in charge of a dispensary in the North of Ireland, I was called to a young man, whose leg was fractured by a cart loaded with brick having fallen upon it in a trench on the roadside. It was a transverse fracture, about two inches above the ankle, and both bones had been driven through his stockings and trowsers into the mud ; so that the hollow of the bone was stuffed with mud, and the periosteum, or lining membrane, through which the bone is nourished, was stripped off for nearly an inch in length, and the bone quite denuded of this covering.

The spasmodic contraction of the muscles forming the calf of the

leg was so great, as the injury had been inflicted some hours previously, that it was impossible to extend the limb sufficiently to replace the bones; and in addition to this, the mud that was impacted in the cancellated structure of the bone could not be perfectly removed; while it would have been injudicious to retain the portion of the bone which, being deprived of its periosteum, must die, and be finally thrown off after a tedious suppurating process. To amputate, therefore, at least three-fourths of an inch of each bone was necessary; and as the patient had lost a good deal of blood, which was still oozing freely from the wound, delay was objectionable.

A fracture having been reported to me, I went prepared with bandages and splints; but now I required a saw, and my residence was three miles distant. Being aware that a carpenter lived convenient, I got his fine saw, and removed three-fourths of an inch of each bone, after which the reduction of the fracture was easily accomplished, and the bleeding soon ceased. And the limb being steadied by splints, lightly applied, the patient was placed on a door, and carried by four men to his residence.

In addition to the external wound caused by the protrusion of the bones, the opposite side of the leg was so much contused by the pressure of the cart upon it, that mortification seemed imminent, and bandages and splints had to be discarded; the limb being placed on pillows, covered with oiled cloth, to receive moisture from cold applications, and the discharge from the wound. And the young man's constitution being good, the wound soon assumed a healthy appearance, and healed in about three weeks.

From this period I endeavoured at every visit to extend the limb a little, by pulling the foot gently but steadily until the leg was the proper length, and in two months bony matter supplied the place of the bone removed, and he was able to walk with crutches; and in about four months he could dig with that foot, and walk without lameness.

I mention this case to show the power of the constitution to restore bone, if permitted to do so. Had the foot been pressed up so as to have placed the fractured and sawn ends of the bone in contact, they would, no doubt, have united, and the leg would have been short by three-fourths of an inch, and consequently deformed; but the success of this case gives evidence that if the patient is young, and the constitution in a good state, bone can be replaced to a considerable extent.

PILES OR HÆMORRHOIDS.

THESE are excrescences which form around the fundament, externally or internally; and in either case they consist of enlarged veins covered with skin or mucous membrane.

EXTERNAL PILES

are first indicated by a sense of heat and uneasiness around the fundament; or on one side only, if it be a single pile. When the pile is single, a small tumour is felt to protrude, in the act of defecation, which for a time retires when pressure or straining ceases. But as this tumour increases in size, the protrusion becomes greater, and the contraction of the sphincter muscle around the fundament, pressing on the pile when down, causes excruciating pain, until the sufferer learns to push the pile up inside the sphincter, or circular muscle or the fundament.

After a time the pile becomes so large that when expelled it hangs out, external to the sphincter muscle, and then no attempt ought to be made to press it up, because a natural cure may take place. The large vein which forms the pile being strangulated by the pressure of the circular muscle, the blood in the pile must coagulate, and suppuration may take place; which, having continued for a time, the pile ceases to be troublesome. And if suppuration does not ensue, the pile becomes a solid tumour, free from pain, and annoying only by its being an obstacle to cleanliness.

Treatment.—When in the latter stage, forming an insensible tumour, it can easily be removed with a pair of scissors, there being no danger of loss of blood; or by a thread of strong silk or cotton tied firmly around its base, so as to strangulate the pile, and make it drop off. But to remove it by scissors is much speedier, less painful, and safer. And after either operation the surface should be dressed with iodide-of-lead ointment, two drachms to the ounce of rendered suet, spread on a piece of soft leather, and worn till the wound heals.

But external piles do not always form separate tumours. They often appear as a cluster of inflamed elevations around the fundament, their bases uniting together; and being so exceedingly painful as to incapacitate the sufferer for taking exercise, even by walking.

In such a case a dose of castor oil should be given immediately,

one ounce to a male adult; and until it operates, six or twelve leeches ought to be applied to the inflamed surface; or, in the absence of these, the elevations should be punctured with the point of a lancet or good-sized needle, to make them bleed freely, there being no danger of too much blood being lost; on the contrary, the bleeding should be encouraged by fomenting with warm water.

After the oil ceases to act, the inflamed surface should be covered with a plaster of iodide-of-lead ointment, as above, and worn until the inflammation abates.

The state of the bowels has great influence on piles, and sulphur is found to be the best medicine for regulating the bowels in such constitutions. Two ounces of sulphur and one of cream of tartar, mixed in a pound of treacle, and a teaspoonful taken night and morning, or at night only, as found necessary, has a good effect. Some dislike the smell of sulphur, and its tendency to make persons susceptible of cold; and to these I have given two grains of aloes and twenty grains of Epsom salts, in a little syrup, at night, as required.

As aloe is known to act chiefly on the lower bowel, there is a prejudice against its use in cases of piles, lest it should increase the inflammation and aggravate the disease; which would be the result if given alone, and in large dose; but when given in small doses, and combined with salts, which act on the upper bowel, my experience convinces me that it is perfectly safe, and the best aperient for piles, except sulphur.

INTERNAL PILES.

The first symptom of these is a sense of weight and heat in the lower bowel, and the presence of something causing an obstruction, that cannot be got rid of when the bowels act.

These piles consist of a mass of enlarged veins, covered with condensed cellular tissue, which is termed by the French "erectile tissue."

The mucous membrane being more yielding than the skin, these veins, and the small arteries in the neighbourhood, often burst, causing considerable hæmorrhage, and giving these tumours the popular name of "bleeding piles."

The quantity of blood that has been lost daily, or at short intervals, by many persons, without debilitating or producing any marked effect on the constitution, is certainly astonishing, and has given rise to the idea that this form of hæmorrhage is critical, and acts as a safety-valve to the constitution of such patients.

This impression, like many other popular errors, is sometimes supported, apparently, by facts; for it is certain that such a drain, long established, becomes necessary to the constitution; and when stopped, requires to be counterbalanced by more active exercise, abstinence from stimulants, and by moderating the quantity of nourishment taken by the individual. But this does not prove the advantage of fostering a disease which is gradually undermining the constitution, and often proves suddenly fatal. On the contrary, it shows the necessity for controlling such hæmorrhage before it becomes habitual, and getting rid of it as soon as possible.

Treatment.—Much can be done by reducing the inflammation by leeches applied externally, and by the use of the sulphur electuary, as directed above for external piles, or of aloes combined with salts.

Together with these, the diet should be altered. The food should be very light; all pastry, rich food, and made dishes should be avoided; and if the patient can be persuaded to become a vegetarian his recovery will be more certain. But all alcoholic drinks must be abstained from, milk and water being substituted for them, or a light bitter after meals.

These measures being adopted for some time, I have seen great benefit derived from burned alum, finely powdered, and applied to the piles after each dejection, or motion from the bowels. A damp sponge having been applied to remove clotted blood or other matter from the bowel, a little of the powder of burned alum, put on a piece of paper, should be applied to the bleeding piles, and as much as possible of the alum pressed up along with the bowel.

Two hours after the alum was applied I directed four ounces of cold water to be thrown up into the bowel by a syringe, retained as long as possible, and repeated every four hours during each day. And these means, when persevered with, seldom failed to effect a cure, unless the piles were of very old standing, or the surrounding cellular substance unusually condensed and unyielding.

Some patients will not, however, persevere in the use of any tedious remedy, and prefer submitting to any operation that promises a speedy cure. In such cases, the bowels having been prepared by a dose of castor oil, ligatures should be applied by needles thrust under the internal piles; and the diseased mass being inclosed in ligatures, which are safer and less painful than when applied to external piles, as the mucous membrane is less sensitive than the skin, scissors or a scalpel can be applied to remove them. But cutting internal piles without the aid of ligatures is

always followed by too much hæmorrhage, unless it be prevented by nitric acid or the actual cautery, applied to the bleeding surface.

FISTULA OF THE FUNDAMENT.

This troublesome disease is one of the melancholy results of internal piles, and occurs generally in cases where there was little, if any, hæmorrhage from the bowels.

The inflammation of piles, which is in some cases relieved by loss of blood, in other instances terminates in suppuration, and the matter bursting into the cellular substance external to the bowel, forms a tumour on one or both sides of the fundament, simulating the appearance of a deep-seated boil, and often taken for one.

After the skin yields, however, and a little matter escapes, the fistula remains open; and it is soon discovered that part of the fluid contents of the bowel pass by this opening, while the depressing effects on the spirits and health of the patient are quite characteristic of this disease.

Treatment.—Fistulous sores are always difficult to heal, unless we can press their sides together, or lay them open by a longitudinal incision. Pressure in this case is not applicable; and as the opening into the bowel is always above the sphincter muscle, its action keeps the sides of the fistula apart.

To inject astringents into the external opening may possibly succeed in obliterating the sinus, and for this purpose as much alum as can be dissolved in a decoction of oak bark is a good remedy, one drachm being thrown up into the fistula, by a small syringe, night and morning.

If this fail, a surgical operation—which lays the fistula open into the bowel, by dividing the sphincter muscle, and then keeping the edges of the wound apart by pledgets of lint, until the fistula heals from the bottom—is an effectual cure for this malady.

WOUNDS.

THESE may be incised, poisoned, punctured, lacerated, or contused.

INCISED WOUNDS

are most frequently met with, and on account of the freedom with which they bleed, are always alarming, and often unnecessarily so. For, although a superficial wound may pour out blood very freely for

a few minutes, yet, as the vessels are small, they naturally contract, and the loss of blood must soon cease.

But if the incision has penetrated deeply, and any large vessel be wounded, compression is necessary to control the hæmorrhage ; and, before attempting to do so, attention should be paid to the appearance of the blood, both as to its colour and the manner in which it escapes from the wound.

Blood coming from a vein is dark or purple coloured, and flows in a continuous stream ; while blood proceeding from an artery is of a bright red colour, and is propelled in jets by each beat of the heart.

To stop bleeding from a vein in any of the extremities, we must make pressure below the wound, because the venous blood is always moving up towards the heart ; but if a vein in the neck be wounded, compression must be made above the wound, as the blood flows down to the heart.

On the contrary, if an artery in the extremities is wounded, we must press above the wound, because the blood is sent down from the heart ; and if an artery on the head or neck is wounded, to stop the hæmorrhage, compression must be made below the wound, because the blood is sent up from the heart.

Presence of mind in such cases is of great importance ; but it requires some training to enable most persons to view composedly the "life's blood" flowing from a fellow creature. Yet, to render efficient assistance, we must be self-possessed, as nothing is more prejudicial than confusion and excitement.

With a finger of each hand the edges of an incised wound should be separated as widely as possible, so as to bring into view the vein or artery that is wounded ; and if this can be seen, a finger applied to its mouth will stem the torrent and prevent further loss, until a doctor can arrive.

If the bleeding vessel is so deep that it cannot be seen, a finger should be pressed down to the bottom of the wound, where, by the sense of touch, the source of the hæmorrhage may be felt, and by pressure controlled.

Nor need any person be deterred from introducing a finger into a fresh wound lest it should cause pain, because, if the finger be clean, the patient will scarcely be sensible of its presence ; and it is often the speediest and best method for arresting the hæmorrhage from a deep wound.

If a doctor cannot be had, and an artery is seen throwing out

blood by jets, the true way to stop it is to tie a ligature around its mouth. This is easily done by seizing the mouth of the artery by a pair of tweezers and drawing it out a little, and then tying the artery firmly with a strong silk or cotton thread, the ends of which should be left hanging out of the wound, until the ligature is thrown off by suppuration.

To render the patient secure against a return of hæmorrhage, it is better to tie both ends of the artery separately, because, although the lower end of the divided artery does not bleed now, yet arteries that join the wounded vessel, perhaps at some distance below the wound, may send blood into the lower part of the artery, and cause bleeding afterwards, by what is called recurrent hæmorrhage.

These means having failed, or not being available, a pledget of old linen or calico, rolled up firmly, and sufficiently large to fill the bottom of the wound, should be pressed down into it ; and then another pledget laid across the wound, and tied firmly, so as to control the loss of blood.

In the absence of a doctor, these pledgets ought not to be removed until suppuration takes place, say a week or ten days, unless loss of blood should return, in which case the pledgets should be removed, larger ones pressed into the wound, and allowed to remain for another week.

Children, by stepping on glass, often wound the deep-seated arteries in the sole of the foot, which are very difficult to control. Such wounds should be very carefully examined, so that all particles of glass may be perfectly removed. This being done, a firm pledget should be pressed down into the wound, and secured by a bandage around the foot and ankle ; and the child should be confined to bed, or if sitting up, should have the foot supported, and not allowed to hang down.

Incised wounds on the forehead, face, or lips, often disfigure persons for life by the unsightly mark that is left by reason of the edges of the wound not having been brought together. Such deformity is easily prevented by putting one or more stitches in the wound, so as to bring its edges together. Nor is a surgeon's needle absolutely necessary for this purpose, as a good-sized sewing needle, with a thread of white silk or soft cotton, does very well.

The only nicety in applying the stitch is to place it at least the eighth of an inch from the edge of the wound, lest the thread should cut the skin through ; and to see that the wound is not puckered, but the edges fairly placed.

After the edges of the wound have been brought together by one or more stitches, it should be farther secured by strips of adhesive plaster put across the wound in the spaces between the stitches, to strengthen these meanwhile, and to support the wound when the stitches are taken out on the fourth day, lest, if kept longer in, they too might cause a mark.

If adhesive plaster is not at hand, a solution of gum spread on old linen or calico, allowed to dry, and then cut into narrow strips, when moistened with the tongue makes a very good substitute for plaster.

A popular idea prevails, I am aware, that the edges of a wound must be brought together immediately after it is inflicted, or else union will not take place. But experience has convinced us long ago of the opposite of this, for until a wound ceases to bleed its edges cannot unite, and any attempt to bring its edges together by adhesive plaster previously to that must disappoint. After the bleeding ceases is the proper time to secure a favourable union, stitches being put in, or adhesive plaster applied.

POISONED WOUNDS.

These may be inflicted by snakes, serpents, vipers, centipedes, and rabid dogs, bees, &c.

Treatment.—To prevent the poison being absorbed into the blood, a ligature should be immediately tied tightly between the heart and the wound, and consequently above the wound if it be on any of the extremities. The wound should also be sucked carefully for some time, which can be done with perfect safety, if the person has no sore on his lips, tongue, or gums.

In addition to these means the poison should be destroyed by the application to the wound of some caustic, as nitric acid; or sulphuric acid, vitriol; nitrate of silver; or any small-pointed iron or piece of wire, made red hot in the fire or flame of a candle, and dipped into the wound.

The nitrate of silver (caustic) is the most manageable, and if brought to a point by moving it through water it can be pushed to the bottom of the wound, so as to destroy the poison and sear the absorbents in the neighbourhood. The proper application of nitrate of silver, or of a red-hot iron, in good time, would be quite sufficient to neutralise the effect of any animal poison, and render it innocuous.

After searing the wounds, they should be covered with a light poultice of bread and water or linseed meal; and the patient should remain quiet, have farinaceous food only, and be attentive to the state of the bowels till the wounds heal.

If drowsiness supervene after snakebite, a stimulant should be given, and ammonia is preferable, because when injected into the veins it proves to be a successful antidote to the poison in the blood. Five grains of the carbonate of ammonia, or half a teaspoonful of sal volatile, or twelve drops of fluid ammonia, should be given in a wineglassful of water every two hours, till the symptoms improve, and then less frequently as required.

In the absence of ammonia, brandy or other spirit should be given in small and frequent portions, to prevent depression, and rouse the vital energies.

The sting of bees and other insects should be removed with the point of a needle or sharp pin; but before attempting to remove the sting, the little poison bag should be carefully cut off with a pair of scissors, lest, when removing the sting, more of the poison might be pressed out into the wound. And the sting being removed, the wound should be touched with strong hartshorn (fluid ammonia) applied with a feather, and repeated every twelve hours if pain continues. Care should, however, be taken that the hartshorn does not get into the eyes, as it would inflame them, but on the skin it leaves no mark.

Strong hartshorn is equally effectual for the bites of mosquitoes, gnats, midges, &c.

In the absence of hartshorn, turpentine or kerosine oil is serviceable for the sting of insects.

PUNCTURED WOUNDS.

These are often more dangerous and troublesome than incised wounds, because they generally penetrate more deeply, and the external opening being small, we cannot examine the bottom of the wound. If there be hæmorrhage, it should be controlled by a firm pledget of linen or cotton pressed down into the wound, and secured by a bandage around the part, and this pledget should not be removed for a week or ten days till suppuration has formed, unless loss of blood should recur, and then the pledget should be taken out, and a larger one put in, capable of restraining the hæmorrhage.

If there be no loss of blood, punctured wounds should be soothed by a light poultice of bread and water.

LACERATED WOUNDS.

Wounds of this kind are chiefly remarkable for the absence of bleeding after such accidents. Wounds, very extensive, and frightful to look at, will often not produce a tablespoonful of blood. Indeed, there are many cases on record where the arm has been torn from the body, by being caught in machinery, without the loss of any appreciable quantity of blood.

This is owing to the fact, that arteries by their own power of contracting, fold in the rugged ends of the torn vessels, which thus form a plug to prevent the issue of blood. Surgeons, when operating, avail themselves of this natural law, and often tear, when it is dangerous to cut, deep-seated parts.

Lacerated wounds are best treated by water dressing; by a piece of surgeon's lint or folded calico, moistened with tepid water, applied over the wound, and then covered with oiled silk.

CONTUSED WOUNDS.

These are somewhat similar to lacerated wounds, being seldom followed by much loss of blood, unless some artery of considerable size be merely wounded, but not perfectly severed or torn across. In such a case the artery cannot contract, as described in lacerated wounds, and must continue to bleed until it is controlled, or the person is exhausted. But the entire limb may be carried off by a cannon-ball, with scarcely any loss of blood.

Contused wounds, of which gun-shot wounds are the principal, should be soothed by poulticing, because they generally contain some irritating substance, such as powder, wadding, or a portion of the dress of the individual, that must be thrown off by the process of suppuration.

Much unnecessary search is often made to discover the seat of a musket ball, and patients are often caused unnecessary pain by efforts to extract it. This arises from a false impression that the wound will not heal until the foreign body is removed; but the contrary has long since been ascertained.

Any metal—silver, gold, lead, iron, if it be not oxidised—may lodge in the human frame for years without doing any injury. A soldier who had been wounded in the left side of the chest during the Peninsular war, recovered perfectly, and died in Chelsea Hospital twenty years afterwards, when the bullet was found imbedded in the muscle of the heart. Pins and needles will remain in the bowels and

other parts of the body for years, without giving pain or sensible annoyance.

GANGRENE.

THIS is the first stage of mortification, and may be caused by any means capable of destroying the vitality of the part, such as exposure to cold, intense inflammation, severe contusions, obstruction of arteries, and also by the use of diseased articles of food.

Extreme cold, causing the part to be frost-bitten, is of frequent occurrence in northern latitudes, and travellers require to take great care to protect not only their feet, but also their face, especially the ears and nose, from exposure to the effects of the intense cold.

The first symptom of the injurious effect of cold is the loss of sensation or feeling in the part, which is benumbed, and of a livid or pale colour.

Parts so affected must not be suddenly exposed to heat, or the second stage of gangrene (mortification) will be produced. These two terms are frequently used as synonymous, but incorrectly so, because gangrene is only an instance of suspended vitality, without any destruction of parts, and still recoverable by the efforts of the constitution, and amenable to medical treatment and the aid of art; while mortification implies the loss of all vitality, and can be removed only by its own destructive process, or by the knife of the surgeon.

Treatment.—Parts benumbed with cold, or frost-bitten, should be rubbed with snow, or with a sponge wrung out of cold water, and in a room without fire, for some time, until sensibility begins to return to the part; then friction with the open hand should be continued, until the natural circulation of blood in the part has been restored. When this has been accomplished, the parts should be covered with flannel, but not exposed to the artificial heat of a fire, for some time.

In cases of suspended animation by the effects of cold, either by immersion in water or exposure to cold air, the same rule is applicable.

When in charge of a dispensary in the North of Ireland in 1836, I was called to a young girl who, on the previous night, had wandered, when returning from a neighbour's house to that of her father. The distance was short, but the night was dark, with wind and sleet; and, having missed the pathway, she was found next day

leaning against a fence at the opposite side of the field, quite lifeless.

It was evening before I saw her; there was no attempt at breathing; the heart was perfectly still; the surface was cold as in death; but the joints, although stiff, were not rigidly so. It seemed to me an instance of suspended animation, still within the limits of hope; but when that opinion was given to the mourning parents and friends, they shook their heads and freely expressed their want of confidence; still they willingly followed my directions.

The body being placed between blankets, all linen being removed, two women were placed on either side—two to rub from the waist down, and the other two from that upwards, with the open hands; but improvement was so tardy that these women became exhausted, and had to be relieved alternately by four others.

After rubbing for about four hours in this manner, artificial respiration was tried occasionally, and in about six hours from the time friction was commenced a deep sigh gave us the first symptom of returning life.

I then got salt heated in a pot, and a quantity of it put into four bags, one for each of the women to rub with, as formerly.

In a short time afterwards breathing commenced, with sobbing, but soon became natural; the action of the heart returned; she opened her eyes, and said, "Where am I?"

Finding that she could now swallow, a cup of tea was given to her, and in a short time she seemed inclined to talk too freely for her safety. Having forbidden this, and desired her to remain in bed for a day or two, and to eat and drink very moderately, I left in the morning; and she recovered without any bad symptom.

This case shows the danger of falling asleep when exposed to severe cold. When we are awake the constitution has a power of resisting the effects of cold much more so than when we are asleep; and this fact should be recollected and attended to when persons are exposed to extreme cold.

Had the girl alluded to kept moving about or watchful until morning, no injury might have followed; but by yielding to slumber, she narrowly escaped the sleep of death.

GANGRENE FROM INFLAMMATION.

Intense inflammation of the bowels, lungs, and other parts, often induces gangrene, and consequent destruction of the part. Such

inflammation is characterised by acute pain in the part, and when this pain ceases suddenly while other unfavourable symptoms remain, we may calculate that gangrene has supervened.

When the lungs are the seat of the attack, the result is declared by the fetor of the breath, which becomes peculiarly offensive; and if the bowels be the part affected, the fatal issue is portrayed by langour and depression.

Treatment.—It is only in the first stage of such inflammation that means can be of any service; and consequently, when severe pain sets in, it should not be neglected.

A warm bath of 102° Fahr. for half an hour, the temperature being kept up, has great power in checking any internal inflammation; and ten grains of Dover's powder, given after the bath, continues the effect by causing perspiration, which should be encouraged.

In plethoric or robust constitutions, leeches should be applied over the seat of pain, and repeated every day till pain abates; each application being followed by fomentations with flannels wrung out of hot water, to encourage bleeding and soothe the pain.

In delicate constitutions mustard plasters, repeated every eight hours, and followed in the intervals by warm fomentations over the seat of pain, generally succeed after the hot bath and Dover's powder; which latter may often be repeated every night with advantage.

If the lungs be affected, the bowels should be freely acted on each day, by half an ounce of Epsom salts given in a cup of ginger tea; but when the bowels suffer, large quantities of warm water and soap thrown up into the bowel as an enema (two or three pints) night and morning, and a dessertspoonful of castor oil once a day, have the best effect.

When gangrene supervenes from a severe contusion or inflammation of any external part, blocking up the arteries that supply it with blood, so that the surface becomes livid and insensible to the touch, our object is to cause the mortified portion to be thrown off as soon as possible; for which purpose we should apply warm poultices of a stimulating character. Linseed meal made with yeast, or the grounds of beer, is an efficient poultice; and in the absence of this, grated carrots well boiled, and renewed frequently, have the desired effect. The constitution meanwhile should be supported by quinine, one grain after breakfast and dinner, and light, nourishing food.

DRY GANGRENE.

In advanced life, ossification or petrification of the arteries or valves of the heart, rendering them incompetent to circulate blood to the extremities, causes gangrene of the toes. This is called dry gangrene, because the part being gradually deprived of blood becomes shrivelled or dried up, and very different in appearance from parts the vitality of which has been suddenly destroyed while still full of venous blood.

When once established, this diseased state of the arteries cannot be removed, and we are occasionally obliged to look on while one toe after another drops off. In the early stage, well-regulated diet, with tonics to improve the constitution, together with warmth to the extremities, may at least moderate this malady.

Diseased food, and especially diseased rye, has been known to cause gangrene of the extremities. The constitution being debilitated, and depriving the heart of blood in a healthy state and in sufficient quantity, the circulation becomes imperfect, and the heart ceases to be able to propel blood to the extremities.

Treatment.—When deficient circulation is noticed in the extremities, and the age of the person does not lead us to expect petrification of the arteries or valves of the heart, strict inquiry should be made as to the kind of food lately used by the patient, and the state of the stomach and bowels should be inquired after.

If we find symptoms of dyspepsia, evidenced by a coated tongue, slow bowels, want of appetite and giddiness of head, the food must be altered, and the digestive powers improved by tonics; of which the solution of the perchloride of iron, ten minims or drops, in a wineglassful of water, after breakfast and dinner, taken through a quill or glass tube to protect the teeth, is generally the most suitable. In the absence of this, one grain of quinine after breakfast and dinner, or a wineglassful of infusion of camomile or quassia, has a good effect.

The bowels should be regulated by two grains of aloes and ten of Epsom salts at night, as often as required. And change of air in such cases is always advisable.

BURNS.

THESE may be divided into two classes: those which affect the cuticle or scarf skin only, and those which destroy the true skin. The former are generally caused by the application of boiling water; and the latter by the action of a red-hot iron, or of flame, as by the explosion in mines of combustible gases, known as "fire-damp," or by the accidental ignition of one's wearing apparel.

Burns caused by boiling water are termed scalds, and are sometimes so slight as to cause merely a blush or redness of the surface; while they are often more severe, producing effusion of lymph between the cuticle and true skin, and the separation and destruction of the scarf skin or external covering.

The water in either case may have been equally hot, but the length of time it was in contact with the skin would influence the extent of the injury. Hence the severest burns by boiling water occur to parts covered with dress, that cannot be removed immediately, and which, being saturated with the hot fluid, keep it in contact with the skin, and deepen the effect.

One may dip an uncovered finger into boiling water, and withdraw it hastily without injury; but this experiment made with a glove on the finger would likely inflict a burn, and perhaps the loss of the nail. In like manner boiling water may fall on the hand or foot of a child, if uncovered, without causing a blister; but if the parts be covered with gloves or stockings, a severe burn will be inflicted.

Aware of this, and acting on the impulse of the moment, anxious parents and friends rush to pull off gloves and stockings, in order to relieve the sufferer; but by doing so they only add to the injury, and increase the agony. For, by dragging off the gloves or stockings, they bring with these the separated cuticle, and thus expose the nervous fibrils which terminate under it to the action of the air and other irritants, which aggravate tenfold the sufferings of the patient.

Treatment.—The great desideratum in the management of scalds is to preserve the scarf skin, which can be done only by preventing the blister "rising;" or, if lymph has been thrown out, by allowing it to escape by a small aperture, made with the point of a lancet or needle.

When any part has been scalded, the blister can always be pre-

vented from rising by the immediate application of any spirit—brandy, rum, or whisky—to the part that has been burned. If the part be uncovered, a piece of calico or linen, large enough to cover the injured surface, should be moistened with spirit, applied as quickly as possible, and kept moist by dropping occasionally a little spirit on the rag, so as to keep it moist as long as smarting or a sensation of heat continues in the injured part. But if spirit be not convenient, kerosine oil may be used as a substitute.

If the part has, however, been covered with gloves or stockings, no attempt should be made to pull off such close coverings, but the part should be instantly immersed in cold water, and allowed to remain in it for a few minutes, until perfectly cooled, when it should be removed from the water and partially dried, by folding it in a large towel, to absorb as much of the moisture as possible.

Spirit, if convenient, should then be dropped on the glove or stocking, to moisten it thoroughly; and this should be repeated occasionally, so as to keep the part moist, for five or six hours. And in the absence of spirit, kerosine or turpentine may be used for the same purpose.

After this application for five or six hours, the glove or stocking should be cut off with scissors, and if any blisters have formed they should be punctured with a needle or lancet, at a depending point, to allow the fluid to escape, care being taken not to remove the cuticle; and the part should then be covered with calico, moistened in spirit, kerosine, or turpentine, for twenty-four hours, by which time, if the injury has been slight, the burn will be healed.

If the injury has, however, been more severe, and a portion of the cuticle is removed, leaving the surface raw and inflamed, the mildest and most healing application that I have tried is the iodide-of-lead salve, made by uniting one drachm of the iodide with one ounce of equal parts of lard and sheep's suet, rendered together. This plaster, spread on thick calico, soothes pain and heals very quickly. Some object to the lead applied to a raw surface, but the iodine acts as an antidote, and renders it quite safe.

Burns inflicted by flame, either from the explosion of combustible gases, or gunpowder, or by the ignition of dress, are generally too extensive and too severe to be benefited by the application of cold water. The true skin is often injured to a great extent, the nervous system is shaken by the accident, and the constitution sympathises so fully, that it must be soothed, and not depressed by cold applications to a large surface.

As a soothing remedy, carded cotton or opened wadding has long been employed in hospitals, and allowed to remain on from six to ten days, so that by excluding the action of the air the discharge may be less, and the wasting of the patient diminished. But the maggots which often form under this covering are a great objection to its use. In hospital I have seen a cupful of these animals crawling on the raw surface of a patient, and, consequently, I have not used cotton in private practice.

A poultice made of the soft part of loaf bread boiled in water, or linseed meal poultice, if convenient, is the most soothing and agreeable application we can make for the first three days. Nor is it necessary to change this oftener than once in twenty-four hours, if a little oil or fresh lard be applied to the surface of the poultice, to prevent it adhering to the skin.

An opiate, to allay pain and reconcile sleep after severe burns, is necessary for a few nights; and the best form is Dover's powder, of which ten grains should be given in a little syrup at bed time; or thirty drops of laudanum may be substituted as the dose for adults, less being given according to age and constitution.

The drink should be toast-, barley-, or rice-water, or rennet whey, and the food should be mild and easily digested; while the bowels are regulated by two grains of aloes, and ten grains of Epsom salts, given in syrup at night.

When the true skin has been destroyed, suppuration must take place, and granulations must form to restore it; and when the surface is large, these natural efforts to effect a cure are always in excess, and require to be restrained; a poultice should not, therefore, be continued after the third day, else the discharge would be too profuse, and weaken the patient, and the granulations would grow too high, forming "proud flesh," quite opposed to a healing action.

After the third day, the burn should be dressed with some stimulating ointment, of which the best is the iodide-of-lead salve, as directed above. It is the most mild and healing, but when required for a large surface it is expensive. A good and cheap ointment can be made with one-fourth pound of Venice turpentine, and one pound of equal parts of lard and suet, rendered and well rubbed together; or one-fourth pound of kerosine oil, combined with a pound of suet or tallow; either of these, spread on thick calico, makes a good dressing, which should be renewed night and morning; and, if the granulations seem to be too abundant, the salve should be made

stronger, say equal parts of turpentine or kerosine and suet, or two drachms of the iodide.

To increase the healing action, after the third day the patient should take half or one grain of quinine, after breakfast and dinner; or, if preferred, ten drops of the solution of the perchloride of iron, in a wineglassful of water, as often.

SCROFULA, OR THE KING'S EVIL.

THIS is generally admitted to be an hereditary and constitutional disease, the subjects of which are often, but not always, of a fair complexion, and so thin skinned that the superficial bloodvessels appear very distinctly, giving to the patient a ruddy complexion; while physiologists have found that in such constitutions the serum, or thinner portion of the blood, is most abundant, and the red particles deficient.

The term scrofula is derived from scrofa, a sow, because pigs are said to be subject to this disease, which obtained the name of king's evil during the reign of Edward the Confessor, whose touch was imagined a cure for this affection. Similar power was afterwards attributed to royal hands, but the scepticism of the nineteenth century has ceased to put faith in such remedies.

The external appearances indicating this peculiar state of the constitution are an enlargement of the lymphatic glands in the groins, armpits, and about the neck. At first they are not painful, and may remain in an indolent state for years; but from childhood up to the age of puberty, they are apt to assume an inflammatory action, and to suppurate, especially in the neck, where they leave unsightly scars.

The suppurating process in such tumours, or glands, is always slow, and the matter produced is not pure pus, but rather a curdy, peculiar substance.

Scrofula, however, is not limited in its action to the external glands, and, as we noticed in the article on marasmus, or the wasting of children, the mesenteric glands are often so enlarged and diseased that they cannot perform their duty in absorbing the chyle to replenish the blood, so that infants are often starved, no matter how well they may be fed. And it is also certain that this lamentable disease frequently attacks other internal glands, as the liver, spleen, and kidneys.

Although considered an hereditary disease, yet, like some others, scrofula may appear as a primary disease, being induced by exciting circumstances; and as we find it always associated with deficient action in the vital powers, we must attribute its origin to such causes as debilitate the constitution. Among these we must include gross improper food for infants, impure, bad air, want of proper exercise in the open air, and exposure to damp and cold.

Treatment.—As this is a constitutional disease, our remedies must be calculated to improve the tone of the general system; and for this purpose cod-liver oil, iodine, and iron are the medicines from which I have witnessed the most improvement, especially when taken at the same time. A teaspoonful of cod-liver oil, increased gradually to a tablespoonful, to be taken after breakfast; ten drops of the perchloride of iron in a wineglassful of water, to be taken through a quill or glass tube after dinner; and two grains of iodide of potash, in a wineglassful of water after tea.

The food should be light and easily digested, but alcoholic stimulants never serve such patients, and should be abstained from; when these are taken to excess, they never fail to hasten the diseased action, and a fatal termination. Patients of this class are generally of a costive habit, which should be moderated by two grains of aloes and ten grains of salts, in syrup, at night as often as required, or if preferred, twenty or thirty grains of Gregory's mixture.

A low, damp locality is unsuitable for them, and should be exchanged for a dry, elevated situation, shaded, if possible, from bleak, cold winds. The sea coast in summer is preferable, and sea-bathing about eleven o'clock, when the day is warm, is generally serviceable; but such constitutions are easily chilled, and sometimes benefit more by a tepid than a cold bath.

When the glands about the necks of children threaten to suppurate, they should be covered with a plaster of iodide-of-lead ointment, made with two drachms of the iodide to an ounce of fresh lard, spread on calico, which, if applied in good time, will generally disperse these tumours; and for scrofulous sores, after suppuration takes place, this salve is the best dressing that can be applied; but the cod-liver oil, iodine, and iron should also be given.

To prevent the notched, irregular cicatrices, so disfiguring to the necks of females, an incision should be made over glands that have suppurated, which is known by their feeling soft and elastic to the touch; and the contents being well pressed out, the membrane that

contained the matter should be caught by a pair of forceps and pulled out of the wound ; because if this membrane or sac be allowed to remain, it would continue to fill with matter, and keep up an unpleasant discharge. This being done, the edges of the incision should be brought together by adhesive plaster, and retained so until they unite.

To remove deformities, I have often dissected out indolent, enlarged glands from the neck, and by choosing a favourable line for the incision, as where a fold or wrinkle might be expected, the wound when healed left very little mark. But in some instances greater difficulty was experienced than had been apparent, for while the external end of the gland moved freely, and seemed superficial by being elongated and curved, the other end passed in under the jugular vein, and was more difficult to manage.

I am aware that many surgeons dissuade the removal of enlarged glands by the knife, nor would I be hasty in suggesting this operation to any patient ; but when asked to remove a tumour that was an eyesore, and cause of discomfort to a fellow-creature, I never hesitated to do so. Nor did any difficulty occur that caused me regret, or that a surgeon of the present day should shrink from.

Much service can be done to such patients by improving the action of the skin by frequent baths, and abundance of friction after each bath. The shower bath is preferable, and should be used morning and evening, tepid in winter, and cold in summer, followed by sea-bathing.

Constant exercise in the open air is also requisite for such constitutions, and unless timidity renders it unsuitable, exercise on horseback is the most eligible. Walking is, no doubt, good exercise, but it needs strong inducements to cause it to be taken with sufficient regularity to sustain or improve health, and consequently gymnastic exercises should be cultivated by both males and females.

An airing in a carriage is very useful for invalids who cannot bear exercise, but it should never be substituted for active exercise.

Travelling is a happy, and perhaps the best means of exercising such constitutions, because the mind is amused and occupied as well as the body, and the frequent change of air is very salutary.

INCOME.

THIS is the popular name given to disease of any of the long bones, caused by inflammation of its periosteum or lining membrane, which affection is similar to whitlow of the finger in a magnified degree. The periosteum, through which the bone is nourished, becomes inflamed, and lymph is poured out under this membrane, separating it from the bone, and thus causing the death and exfoliation of the bone.

This inflammation is sometimes the result of blows or injuries, but frequently its origin cannot be traced to any such cause, and can only be attributed to a peculiar state of the constitution, known as the scrofulous diathesis.

When neglected at an early period, the consequences of this inflammation are always lamentable. The quantity of lymph, although small at first, acts as a wedge separating the periosteum from the bone, and the injury goes on increasing, so that the whole length of the bone may be destroyed. The patient suffers meanwhile constant pain, and is wasted by hectic fever, while the constitution is endeavouring to remove the diseased bone by profuse suppuration, which may be prolonged perhaps for years in succession.

Treatment.—If seen early, leeches should be applied over the seat of pain, from three to twelve, according to the strength of the patient and the extent of the inflammation. After the leeches sit, the part should be fomented with flannels wrung out of hot water, to encourage the bleeding and soothe pain, which, if it continues, requires the leeches to be applied next morning.

If the leeches and fomentations remove the pain, the part should be covered with a plaster of iodide-of-lead ointment, made with two drachms of the iodide to one ounce of equal parts of lard and suet, rubbed together, and spread on soft leather or thick calico, which should be constantly applied until any lymph that may have been thrown out is perfectly absorbed.

If, on the contrary, the pain continues after a second leeching, an incision should at once be made down to the bone, to allow the fluid to escape ; and the wound should be kept open by a tent, till it heals from the bottom.

Parents and friends are always opposed to this operation of

cutting down to the bone, and look upon it as one of the cruelties of surgery. Because, the disease being deep-seated, the skin is seldom discoloured ; it may, indeed, be smoother and whiter than formerly, giving no indication of the mischief underneath ; and, consequently, those who have not studied disease cannot understand the necessity for such an operation, nor appreciate the benefit that must accrue from it. The cruelty, however, consists in deferring the operation too long, and subjecting an unfortunate patient to years of suffering, that might have been terminated in a few days or weeks.

When attacked with such inflammation, absolute rest is required, to allow the person to recover. The food at first should be farinaceous only ; but when discharge commences, the food should be light and nourishing, all stimulants should be withheld, but cod-liver oil, iodine, and iron should be given, as directed in the previous article.

The bowels should be regulated by an astringent, if relaxed ; and by a mild aperient, if costive ; while change of air, especially to the sea coast, is very commendable.

DISEASE OF THE HIP JOINT.

This affection, like the one last noticed, always sets in insidiously, and has often made considerable progress before it is attended to. It is also met with chiefly in constitutions of the scrofulous diathesis.

It attacks children and young persons of both sexes, who at first complain of weakness of the limb, but feel no pain except in the knee, generally the right one, which seems quite sound. This causes parents to imagine that the knee has been slightly sprained, and diverts attention from the seat of disease, until, in too many cases, the joint is destroyed, the head of the bone absorbed, and the limb shortened for life.

In the article on hysteria, we mentioned that young ladies suffering from that affection often complain of pain in the hip joint, causing much anxiety to their parents, and frequently inflicting on themselves unnecessary punishment by being treated for a disease that does not exist ; but this hysterical pain is easily distinguished from disease of the hip joint.

Because the young lady attributes the pain to the hip joint, which when really affected does not feel painful, the pain being

always felt in the knee or leg ; and because her pain is greatest when the joint is touched lightly, while firm compression causes her no uneasiness.

On the contrary, when the hip joint is diseased the patient complains of no pain when you touch opposite the joint ; but when you put a hand on each haunch bone, and press them firmly towards each other, so as to bring the head of the bone in contact with its cup or socket, an expression of pain is elicited, and the nature of the disease ascertained.

If the disease has existed for any length of time, the appearances betray its character. Owing to relaxation of the ligaments of the joint, the head of the bone drops down out of its socket, the haunch bone seems depressed, the limb is elongated, and the patient, when attempting to walk, drags the limb.

Treatment.—Confinement to bed, or a sofa, is absolutely necessary for the favourable treatment of disease of the hip joint, which cannot be prevented nor lessened, unless we give perfect rest to the joint, and relieve it from the pressure of bearing, even for a moment, the weight of the body in the erect position. Consequently, if moving from bed to a sofa, the patient must be carried carefully, so as not to injure the affected joint, and should be impressed with the importance of keeping that joint perfectly still. This being attended to, the next thing to be done is to lessen the inflammation of the joint, and improve the general health.

Some commence by applying leeches around the joint ; but, as the inflammation is not of the acute kind, and as such patients seldom have blood to spare, I have not adopted that practice.

A dose of aperient medicine should be given first, and when the bowels have been acted on by half or one ounce of castor oil, a blister, four inches long and two broad, should be applied in the hollow behind the haunch bone, technically called the trochanter, and kept on eight or ten hours, till it acts. When the blister is taken off, the scarf skin, as far as it is raised by blisters, should be cut off with scissors, and the surface dressed with bread and water poultice for twenty-four hours ; after which it should be dressed with a plaster made with two drachms of iodide of lead to an ounce of equal parts of lard and suet rendered together, to be spread on thick calico, renewed every morning, and continued for six days.

Three days after the blister is applied behind the haunch bone, a blister of similar size is to be placed in front of the joint on the groin, at the top of the thigh, kept on till it rises, and then

poulticed for twenty-four hours; and afterwards dressed with the iodide-of-lead ointment, as the other.

At the expiration of a week from the application of the blister behind the haunch bone, the salve should be taken off and the blister re-applied until it rises, which, as the skin is thin, it may do in a few hours, when it should be poulticed as the first, and dressed afterwards with the salve, as before.

Three days after this the blister should be repeated in front of the joint, kept on till it rises, and then poulticed and dressed as the former. In this manner a blister should be repeated once a week, behind and in front of the joint; and the surface kept covered in the intervals with the iodide-of-lead salve, until the joint gives evidence of freedom from pain and inflammation.

While a blister is acting the patient should drink freely of toast- or rice-water, or light whey, to prevent the poison of the flies irritating the kidneys and bladder, which is apt to occur if fluids be not taken freely.

Meanwhile the state of the constitution should be attended to. The food should be chiefly farinaceous; good stale bread, eaten with milk, and beef- or mutton-tea or chicken broth, with boiled rice or maizena; and the drink water or rennet whey or apple-tea. But alcoholic stimulants must be prohibited.

The bowels should be regulated by two grains of aloes and ten grains of salts, in syrup, at night, as often as required to keep them acting.

To improve the state of the blood, cod-liver oil should be given, commencing with a teaspoonful, to be increased gradually to a tablespoonful, after food, morning and evening; and two grains of the iodide of potash, in a wineglassful of water, every day, after dinner.

Should these means fail to check the inflammation, which never occurred to me if the patient was seen in good time, or should the joint be allowed to suppurate before treatment; then poultices should be applied to encourage the matter to come to the surface; the constitution should be supported by light nourishing diet; the cod-liver oil and iodine should be given; and if seasonable, the patient should be removed to the sea coast.

The process of removing decayed bone by the efforts of the constitution is so tardy, requiring months and sometimes years, that sufferers are often glad to avail themselves of the aid of art to relieve pain and abridge the delay. And by a surgical operation the diseased head

of the bone can be excised, and the suppurating process converted into a healthy wound.

Whichever plan be adopted, whether to remove the diseased bone by an operation, or to wait upon the efforts of the constitution, care must be taken not to allow the weight of the body to be thrown on that limb too soon. Parents anxious to see their child able to walk, are apt to encourage it to attempt to do so too soon, by allowing it to put the toe to the ground, or providing it with a cork heel to its boot; and by this means the thigh bone is pushed up on the ileum or buttock, and the limb is permanently shortened more than it might have been.

On the contrary no attempt should be made to use the limb until nature has formed a new socket for the head of the bone; until then the patient should use crutches, well padded and with a spike in the end to prevent slipping. And the crutches should not be discontinued without the advice of a medical practitioner.

WHITE SWELLING OF THE JOINTS.

This peculiar affection of the joints has obtained this name because, although the joint may be considerably enlarged, its cartilages diseased, and its ligaments thickened, yet the skin retains its natural colour, and gives no indication of the inflammation underneath it.

This disease, like that of the hip joint, is of scrofulous origin, and may attack any joint, but it is seen principally in knee-, ankle-, elbow-, and wrist-joints; oftenest in the knee.

It may be mistaken for neuralgia or rheumatism of the joint; but the characteristic features of either disease are sufficiently marked to enable us to discriminate.

It is generally attributed to some injury, as a fall or sprain, which in a constitution prone to such diseases, is quite sufficient to be an exciting cause.

In rheumatism of the joint the pain is acute, distinguished by paroxysms, great restlessness, and nightly exacerbations. But in white swelling the pain at first is trifling, causing merely stiffness of the joint, and pain only when moving it or attempting to use it; so that the disease has often made considerable progress before it has been noticed, and even in the advanced stage it is not accompanied with the restlessness characteristic of rheumatism; because the parts that suffer most are the cartilages, which are not endowed with much sensibility.

These cartilages possess also so little vitality, that physiologists are of opinion that if they be destroyed nature has not the power to restore them. And hence the danger of this species of attack, which if neglected in proper time or badly treated must at least deprive the patient of the use of the joint, the most favourable termination being the destruction of the cartilages and the growing together of the bones, technically called "anchylosis" or stiff joint.

White swelling of a joint may also prove fatal, because when the cartilages are destroyed they must be thrown off by suppuration, that is often very abundant, and, together with the hectic fever that sets in, is so wasting to the constitution, that life can be preserved only by amputating or excising the diseased joint.

In this operation, as in that of the hip joint, art has triumphed over disease, and, by excising the diseased ends of the bones, is enabled to retain a useful limb.

Treatment.—An inflamed or diseased joint requires absolute rest, and without this no improvement can be made.

The patient should, therefore, be confined to bed or a sofa, and the joint kept in the most comfortable position, which is generally extended or straight; nor should the joint be used or moved under any pretext.

A blister large enough to cover one side of the joint—say four inches by three, or less in proportion to the size of the joint—should be applied and kept on, eight or ten hours, till it acts. When removed the scarfskin that is raised by the blister should be cut off with scissors, and a poultice of bread and water applied for twenty-four hours, when it should be dressed with the iodide-of-lead salve, made with two drachms of the iodide to an ounce of equal parts of lard and suet, rendered together, to be renewed every morning, and continued till a fresh blister is put on.

Six days after the first blister, one of similar size should be applied to the other side of the joint, and treated as the first, and every six days the blister should be repeated, alternately, to each side of the joint; the surface in the intervals between the blisters being constantly covered with the iodide-of-lead ointment, which never smarts unless there is salt in the lard.

This treatment must be continued until the joint ceases to be painful, and the swelling subsides. This improvement being obtained, the blistering may be discontinued; but the entire joint should now be enveloped with a plaster of the iodide-of-lead salve, and continued around it, while absolute rest is insisted

on, until the joint can be moved without pain or feeling of uneasiness.

As the iodide of lead is expensive the ointment should be spread on soft leather, which need not be changed, but have the ointment renewed, as required.

In the early part of my practice I was in the habit of blistering the entire joint at once; but experience taught me that this irritated too much, and that more benefit was gained by acting, alternately, on one side of the joint only, aided by the ointment.

In addition to the external applications, the patient should take cod-liver oil twice a day, and the iodide of potassium once a day, as directed above. All alcoholic stimulants are injurious, and must be abstained from.

For the first week or two the food should be farinaceous, with milk; but after the person has got accustomed to confinement, beef or mutton-tea, or chicken broth, may be taken once a day; and afterwards, if these do not increase feverishness, a lightly-boiled egg, or roast fowl or white fish, except eels or herrings, may be taken once a day.

The bowels should be regulated by two grains of aloes and ten of salts, in syrup, at night, as required. And as such patients cannot take exercise in the open air, removal to a healthy district is advisable, and the sea-coast is preferable.

RICKETS, OR DISTORTION OF THE BONES.

This is of similar origin to the last-mentioned disease, and is another form of the scrofulous diathesis.

It is first noticed in children about the sixth month, when they begin to waste and decline; and it continues often to the age of maturity, especially with females, with whom it causes distortions of the bones of the pelvis, which are exceedingly unfavourable to them as mothers.

Such children, when born, are usually plump and well formed; but it is soon noticed that they do not thrive; their bones are very small; their muscles feel soft and flabby; the fontanelle, or opening of the head, remains flaccid; the head is too large for the slender neck to support; teething is protracted till an unusually late period; the ribs at the top of the chest fall in, causing the "pigeon breast;" if allowed to stand on their feet their legs become distorted; and the long bones may be unusually enlarged. These are the general

symptoms ; but we never see them all present in the same case.

Treatment.—As this is a disease of the entire constitution, our remedies must be such as are calculated to improve the general health.

If the child is on the breast, a change of nurse is required, and one should be chosen as free as possible from any strumous or scrofulous taint ; and the child should be suckled till it gets its first set of teeth perfected. If the child has been weaned, it should be fed on cow's milk, with one-third of water and a little sugar ; but it should have nothing in the shape of solid food till after it has got its first set of teeth.

Cod-liver oil, beginning with an eggspoonful increased to a dessertspoonful, twice a day after food, has a good effect, if it does not cause diarrhoea, which is frequent with such children, and often requires to be restrained by a little chalk mixture ; but if an aperient be necessary, ten grains of Gregory's mixture is suitable.

A dry, elevated situation should be chosen, and as infants of this constitution cannot be encouraged to walk early, they should be allowed to creep at will, and be often carried out in the open air when the weather is favourable.

When the period of nursing is over, they require particular care in the management of their health. Their food should be light and easily digested ; and as they are often benefited by a little tonic medicine occasionally, five to ten drops of the perchloride of iron, given in a little sweet milk after food, suits such constitutions.

They are always susceptible of cold, and their dress should be sufficient to protect them from chills ; while the opposite extreme of muffling too much is very reprehensible.

Their constitutions are not vigorous enough to be benefited by cold baths ; tepid baths are more suitable ; nor does any attempt to make them hardy by exposing them to cold produce the desired effect, but generally the opposite.

In intellect such children are generally precocious, being often more inclined to read than to play, so much so that parents frequently require to restrain them, rather than encourage them to learn.

Mechanical aids, as straps, bandages, and artificial supports, always disappoint, and cannot be recommended. They are far inferior to good air and strict attention to regimen.

CURVATURE OF THE SPINE.

This malady is generally considered to be also of constitutional origin ; but it is frequently the result of too much confinement, and careless, lolling habits. There are two kinds of it, the lateral and the posterior.

The interstices between the bones of the vertebræ that form the spinal column are occupied by an elastic substance, capable of being compressed or made thin on one side, while it juts out on the other, on which there is less pressure. Hence lateral curvature of the spine is seen oftenest with young ladies who sit too much in school ; and with whom the muscles, from want of proper exercise in the open air, become too weak to be able to support the body.

As the right arm is used most in writing, drawing, and playing on the piano, young ladies lean to the left side, and consequently in nineteen cases out of twenty the curvature is on the right side. It commences gradually, causes no pain, and is seldom noticed till too late, because when the elastic substance between the vertebræ has been unfavourably compressed for a given time it ceases to rebound, and becomes permanently fixed in that position, causing the right shoulder to jut out and be much more prominent than its fellow.

Treatment.—As all medical practitioners join in the opinion that lateral curvature of the spine is the result of muscular weakness, many prescribe rich food, ale, porter, and wine, with rest on a hair mattress, sofa, or inclined plane. But from this plan of treatment I beg leave to dissent, for although we have evidence of muscular weakness, it is the result of repletion and inaction.

We seldom, if ever, meet with lateral curvature of the spine among the daughters of the peasantry, who get plenty of exercise in the open air, nor do we in Australia see this disease or deformity affecting the aboriginal females who, like those of other savage tribes, dine last and carry all the burdens.

We have perfect evidence that this deformity in too many of the fair sex of the present day is the result of civilization, luxury and indolence, or want of exercise, and does not want the use of stimulants, increased nourishment and rest, but merely requires that the food taken be vitalized by inhaling more oxygen in the open air, and that the muscles be strengthened by proper use.

The best prescription for such patients is a drill-sergeant to teach them to walk properly ; a riding-master to oblige them when on the saddle to sit erect and throw the shoulders well back, so as to

expand the chest ; and a careful mistress, or governess, to see that young ladies sit straight, and do not loll or lean to one side when at their studies.

In addition to this a little tonic medicine is occasionally useful, and iron is generally the best, ten drops of the solution of the perchloride of iron in a wineglassful of water, taken through a glass tube to protect the teeth, after breakfast and dinner, if the countenance is pale, but for those of a florid complexion a wineglassful of infusion of chiretta, or quassia, is preferable. And the bowels should be regulated by two grains of aloes and ten of salts, in syrup or pills, at night, when required.

These means, if adopted in proper time, and continued while young ladies are growing, and until their forms are fully developed, are certain not to disappoint.

On the contrary most fond mothers wish their daughters to be "accomplished ;" to play the piano at eight years of age ; draw with accuracy at ten ; and take a landscape at twelve years ; while as a consequence they must possess a deformed frame and a delicate constitution during the remainder of life. For although such deformity is easily prevented, it is only in the earlier stage that it can be cured ; once it is fairly established our best efforts can do no more than prevent an increase.

Mechanical means, such as steels and bandages, are false aids and better dispensed with ; nor should any young lady be confined to a couch, or sofa, for lateral curvature of the spine. To take the weight off the spine during the intervals of exercise is necessary, and for this purpose the patient should lie on a sofa or hair mattress, on her back or on the right, the curved side.

THE POSTERIOR CURVATURE OF THE SPINE.

This species of distortion of the spine affects the male as well as the female sex, and is more allied to the scrofulous diathesis than the last mentioned. It commences with a jutting-out of the spine or prominent bones of the vertebræ, and a difficulty in lifting the feet, with consequent tendency to trip when walking.

This form is much more to be dreaded than lateral curvature, which causes only a deformity, while the posterior curvature of the spine may produce paralysis of the lower limbs.

Treatment.—For this kind of curvature absolute rest is indispensable. The patient must be confined to the horizontal

position on a sofa or hair mattress, and stimulants, in some form, must be applied externally to the spine.

Some apply issues on either side of the spine, but the means most useful in my experience was a blister six inches by two applied on one side of the spine, kept on eight or ten hours till it acted, the cuticle when raised, cut with scissors, then poulticed with bread and water for twenty-four hours, and dressed afterwards with iodide-of-lead salve, made with two drachms of the iodide to an ounce of rendered suet. Six days after the first blister, another should be applied to the opposite side of the spine, and treated in the same manner. And every six days the blister should be repeated to either side of the spine, the surface being dressed in the intervals with the iodide-of-lead ointment.

This being a disease of the constitution it requires internal as well as external remedies, and cod-liver oil, a teaspoonful, increased gradually to a tablespoonful, after food morning and evening, together with two grains of the iodide of potassium in a wineglassful of water after dinner, promises the most assistance; but if the oil disagrees the iodide should be given twice a day.

Weakness being one of the first symptoms of this disease, some advise rich food and alcoholic stimulants, which, as far as I have noticed, have always been injurious. The food at first should be very mild, principally farinaceous, and all stimulants avoided.

Constant attention should be paid to the state of the bowels, apt to become torpid by reason of the confinement, and requiring to be regulated by a mild aperient.

The period of rest or confinement should be regulated by the amount of improvement that is made, nor should the treatment be discontinued until the spine seems perfectly recovered, and in a healthy state.

IRRITABILITY OF THE SPINE.

This malady often causes unnecessary alarm by simulating disease of the spine. It may affect any part, from the nape of the neck to the termination of the spine, causing pain on pressure, but the dorsal and lumbar vertebræ are the most frequent seats of this affection, which is merely neuralgic and symptomatic of disease of stomach in men, and of the womb in females.

In the article on hysteria we noticed that these neuralgic pains along the spine have often caused unnecessary restraint and punishment to young ladies who would have been more benefited by exercise on horseback.

Treatment.—The only local application necessary for either males or females is friction along the spine with a stimulating liniment, and equal parts of hartshorn and oil, used night and morning, does very well; but turpentine is still more efficient, if the perfume is not objectionable.

If dyspepsia be the cause of the irritability, we must direct our attention to the improvement of the digestive organs, and endeavour to find out the cause of indigestion, and remove it. Alcoholic stimulants, tea and coffee in excess, as well as tobacco, are fruitful sources of dyspepsia, and often captivate their slaves so fully, that they are very unwilling to forego their use; but in many instances there is no alternative, if the patient wishes to enjoy health. Nor is the sacrifice great, because one or two grains of quinine taken after food thrice a day for a little, prevent any discomfort by leaving off these things that are noxious to the constitution.

If hysteria produces the irritability, we must endeavour to improve the nervous system, and the state of the female health; and ten drops of the solution of the perchloride of iron, in a wineglassful of water, taken through a glass tube to protect the teeth, after dinner, and two grains of the iodide of potassium, in a wineglassful of water after breakfast, suit most cases of this kind, if the bowels be regulated by two grains of aloes and ten of salts, in pills or syrup, at night, when required.

The tepid shower bath in winter, and cold in summer, is very serviceable, and also sea-bathing in the season. Exercise in the open air is indispensable, and on horseback is always the most useful.

SCURVY.

THIS disease, at one time so prevalent and fatal in the British fleet and mercantile navy, is now so seldom seen that it almost escaped my recollection.

Physiologists consider that it arises from a deficiency, in the blood, of the vegetable principles, lime, soda, sulphur, and potash, especially the latter, and my experience supports this theory; for among dispensary patients in the North of Ireland, who lived almost entirely on potatoes, with salted herrings occasionally, I never saw an instance of scurvy, while it does occasionally occur in the interior of Australia, where shepherds get plenty of good meat and flour, but are deprived of vegetables.

This disease commences gradually, and is thereby distinguished from purpura, which we noticed formerly as setting in suddenly.

It is characterised by lassitude, stiffness of the muscles, pains in the bones, and difficulty of breathing on the least exertion; the gums are spongy, the breath is offensive, the countenance pale and swollen, and the extremities are covered with livid spots.

As the disease advances, depression of strength and spirits increases, and hæmorrhage occurs from the gums, limbs, stomach, and bowels; and unless timely aid is administered, the constitution must soon succumb, being overcome by dropsy, dysentery, or syncope from exhaustion.

Treatment.—The extreme prostration of strength indicates the necessity for absolute rest, with good air, and sufficient warmth; and the state of the blood requires an alterative, which we find in lemons, oranges, watercresses, salads, and potatoes, together with good fresh meat, as soon as the state of the gums enables the patient to masticate it. And until then the constitution must be supported by beef- or mutton-tea, the essence of fowl, boiled *in vacuo*, or the juice pressed out of the lean of raw meat.

When fresh vegetables and fruits cannot be had, lime juice mixed with sugar and water should be taken freely; and the patient should have ten grains of the chlorate of potash, in a wineglassful of water, and ten drops of the solution of the perchloride of iron in a wineglassful of water, to be taken alternately, one of them every six hours; and the bowels should be regulated by two grains of aloes and ten of salts, in syrup, at night, as often as required.

FUNGUS HÆMATODES.

This is a dark-coloured tumour of malignant character, nearly allied to cancer, and it forms occasionally on the periosteum of bones, and also in the cellular substance under the skin.

Two cases that occurred to me were both of the latter kind. One of these patients was a female, with whom the tumour was seated on the abdomen a little below the umbilicus, or navel, and had protruded through the skin, forming a vascular mass the size of a walnut, while the constitution was in such a miserable state that art could be of little service. The other patient was a sailor, with whom the disease formed on the front of the thigh in the upper third, showing a dark oblong tumour beneath the skin. He was a strong, muscular man, and as the tumour latterly was very painful, and

unfitted him for duty, he was anxious to get it removed; and as it had formed no adhesions, except to the skin, through which it had not penetrated, its removal was advisable.

The tumour, when extirpated, measured three inches in length, and two in breadth, and when cut into was found to be cancellated in its structure, and full of blood.

Such tumours indicate a bad state of the constitution, are of rapid growth, and they can be influenced by no treatment except removal by powerful escharotics, as the chloride of zinc, or the actual canter, or extirpation by the knife.

Nor does extirpation give more than a respite to the sufferer. The man I operated on returned to his ship, and I lost sight of him; but the disease being constitutional, it is always certain to recur at some period.

Treatment.—If the patient be seen in good time, and the tumour be in a favourable position, to remove it by the knife is the speediest and most certain means of benefiting the patient. But if it has advanced so far as to be an open sore, and the surrounding parts affected, we should act upon the diseased portion with the chloride of zinc or a red-hot iron, followed by poultices, until the slough is thrown off, leaving the base in a healthy state.

Meanwhile the constitution should be improved through the blood, by giving two grains of the iodide of potassium in a wine-glassful of water morning and evening, and ten drops of the perchloride of iron in a wineglassful of water, after dinner. These medicines should be continued for a month, and afterwards the iodide and the iron should each be given once a day.

The food of such patients should consist of fowl either roasted or boiled; the lean of good meat, either beef or mutton; eggs, if they agree; and white fish occasionally; but pig's flesh and salted meats should be avoided.

If pain be severe, so as to cause sleeplessness, in chronic cases anodynes should be given, taking such at first as do not affect the head or constipate the bowels. Three grains of the extract of hyoscyamus, increased if necessary to five grains, have a good effect; and the extract of conium in the same doses, acts similarly. Should these fail, one grain of the extract of opium, increased if requisite to two grains; or one-fourth grain of the muriate of morphia, increased to half a grain, must be substituted, and given at night; but opiates during the day are not commendable.

The bowels should be regulated by a mild aperient, and the action of the skin should be facilitated by warm clothing, and tepid baths, given frequently.

CAULIFLOWER EXCRESCENCE.

THIS disease is also of malignant character, and closely allied to cancer. It commences with small elevations, which accumulate rapidly, and, coalescing, soon form a mass similar to the head of a cauliflower, from which it is named.

Like most constitutional diseases, it is little influenced by local applications or internal remedies, and generally requires to be removed by the knife, after which it is too apt to return.

It is not a very common disease; three cases only came under my notice. One of these was a man of apparently robust constitution, but irregular habits, who was a patient in the Sydney Benevolent Asylum, under the care of the late Dr. Bland. The excrescence formed around the edge of the fundament, and had to be removed by the knife. The second was a man about sixty years of age, who, about six months before he consulted me, noticed a small tumour at the edge of the urethra, or water passage, which gradually increased to the size of a hen's egg, occupying the top of the penis, and obstructing the flow of urine. To remove the entire disease, I was obliged to amputate nearly half of the penis, and the result was favourable, for, although he lived six years after the operation, the disease did not return. The third case was that of a woman, whom I saw in consultation with the late Dr. McKellar. In this instance the disease had formed around the mouth of the womb, and had not made much progress, and, as her accouchement was approaching, it seemed advisable to defer operating on her under present circumstances. I did not see her again, but I learned that she gave birth to a still-born baby, and died a few days afterwards.

Treatment.—To destroy the diseased mass by powerful escharotics, or to remove it by the knife, is the only expedient by which the sufferer can be materially benefited. And if this be done, tonics, regular diet, and abstinence from stimulants may prevent a relapse.

The old man on whom I operated lived principally on milk and farinaceous food, and abstained from stimulants; took two grains of the iodide of potassium in a wineglassful of water, after breakfast, and ten drops of the solution of iron, after dinner, for three months after the operation, and for a few days, at intervals of perhaps a month; and he had no return of the disease during the remainder of his life, a period of about six years. His skin being naturally

dry, I advised a warm bath, at night, once a week, and a shower bath every morning, but that part of my instructions was not well attended to.

FATTY TUMOURS.

THESE are not malignant, but they are often troublesome, from their number, position, and their immense size. They may form on the head, the back, the chest, or any other part of the body. When seated on the head, they are popularly called "wind-galls." They give no pain, and they are troublesome chiefly as being eyesores, or a cause of deformity.

A woman in the interior of New South Wales had one of these tumours on the top of her left shoulder, the size of a man's head, so that it hung down upon her chest, and had to be supported by a handkerchief around the neck.

There being no doctor in the district, a convict, who had been a wardman in a London hospital, undertook to remove it by a ligature, and tied it firmly around the base with whipcord. The poor woman, anxious to be relieved of the burden, which was always increasing, endured the torture, until the skin being cut through, some of the bloodvessels gave way, and bled very freely, which alarmed the operator, caused him to remove the ligature, and send the woman to Sydney.

Had the ignorant man not destroyed the skin, the removal of the tumour could have been easily accomplished ; but the surface occupied by its base was extensive, and there being now no skin to cover the wound, rendered the operation much more hazardous, and the healing process very tedious. Assisted by the late Mr. William Houston, I removed it, and, her constitution being good, the wound healed kindly.

Treatment.—Neither iodine nor any other stimulant applied externally has any influence on fatty tumours, and medicine given internally is equally inefficient.

They are best treated by the knife, and if excised carefully, skin being retained to cover the wound, the operation is simple and safe ; but ligatures should never be applied for the removal of fatty tumours.

ENCYSTED TUMOURS.

Small tumours, enclosed in a membrane, or bag, filled with a limpid fluid, form in different parts of the frame, but are met with most frequently on the upper eyelid. And they are troublesome, like fatty tumours, by being an eyesore or cause of deformity, or by pressure on a sensitive organ.

Treatment.—These tumours may be removed by extirpation, or by a seton, followed by pressure, to make the sides of the cyst adhere, as we described in the article on the enlarged bursa frequently seen on the back of the hand; but when seated in the upper eyelid they must be excised. In the latter position they are found to adhere either to the skin or the mucous membrane that covers the inner surface of the eyelid; and before operating it is important to ascertain to which surface the membrane is attached.

If the tumour adheres to the mucous membrane, the eyelid should be everted, and the tumour removed from the inner side; and this is the easier operation, because when the eyelid is turned down, the edges of the wound come together, and require no sutures to attach them. But when the operation is performed through the skin, the wound must be brought together by needles or sutures, to prevent an unsightly scar.

A needle put through the edges of the wound, and a thread folded across, is the usual plan; and in this way I operated on a patient early in my practice.

The patient had come some distance to my residence, and, being operated on, was desired to return on the third day to have the needle removed; but she returned the next morning, with rather a singular aspect, she having got, seemingly, a double eye. On her way home she had called at a public-house, and having taken a little too much, during the night she had not only dragged the needle away, but had also torn the mucous membrane, so that the eyeball was exposed by two apertures.

Having made the edges of the wound raw again, I applied two sutures by a silk thread, and detained the patient at my house till the union was perfect. Mindful of this mishap, I afterwards preferred sutures to needles in similar operations.

BLOODY, OR ANEURISMAL TUMOURS.

Tumours of this kind, called “aneurisms by anastomosis,” may form on any part where bloodvessels are numerous, most frequently

on the forehead and about the face. They consist of a number of bloodvessels united together, and enlarged so as to form a florid mass of considerable extent.

The tendency of such tumours is to increase until the skin and coats of the bloodvessels yield, causing dangerous hæmorrhage ; and it is advisable that such tumours be removed at an early period.

Treatment.—As these tumours appear generally in childhood, vaccination gives us a favourable opportunity of removing them, because the inflammation produced by the cow-pox obliterates the bloodvessels, and performs a radical cure. For this purpose, a healthy child with a good pox should be chosen, and lymph taken fresh from the arm should be inserted at short distances from each other all over the tumour ; and the fifth day, when vesicles begin to form, any parts of the tumour that have missed should be supplied again with lymph taken from the nascent vesicles, which method can scarcely fail to succeed.

But if the patient has been vaccinated formerly, the tumour must be excised by a surgical operation, which is sometimes troublesome, owing to the freedom with which the tumour bleeds. Powerful astringents, even the actual cantery, are often required to control the hæmorrhage, which, if not restrained, might soon prove fatal to a young child.

PART II.

DISEASES PECULIAR TO FEMALES.

A SYSTEM of midwifery will not be expected in a popular treatise, such as we aim at ; but it seems equally certain that a family medical guide would disappoint, were it to ignore the diseases of women and children.

Misgivings, we know, prevail with many respecting the propriety of publishing what the innate modesty of every female is so careful to conceal ; but as the Bible, that epitome of knowledge and best guide of human actions, has given its sanction, our duty seems evident.

We shall, therefore, notice a few peculiarities and diseases which every father and mother require to know, for the protection of their offspring ; which every young female ought to know, for her own safety ; and which every young man should know, to enable him to render to the weaker sex that sympathy which their constitutions require, and have a right to expect.

THE WOMB.

This organ, which is technically called the “uterus,” is, with its appendages, the great cause of distinction between the male and female constitutions. In other respects, the anatomy of both sexes is almost similar ; but this organ, with its accompaniments and extensive sympathies, gives a susceptibility and sensitiveness peculiar to the female.

In the article on the stomach, we observed the great influence which that organ exerts over the action of the heart and the state of every part of the human frame. Nor are the sympathies with the womb less extensive and remarkable, giving to the female a second

and an additional sensitive organ, which influences her health, her feelings, and all her actions.

The external part, commonly called the "privates," is only an entrance or hall, the womb being an inner apartment, situated in the bony pelvis, between the bladder and the rectum, or lower portion of the bowel.

The womb in the virgin state is about two and a half inches long, and one and a half inches broad, at the upper or broadest part towards the body, the neck or smaller end being nearly an inch long, with an aperture about the size of a goose-quill.

That an organ of this extent can contain a full-sized baby, must seem astonishing ; but the works of the Almighty Creator are so perfect, that as soon as impregnation takes place the womb begins to increase in size, so as to accommodate its capacity for one, two, three, or even four infants at a birth.

The womb has four important appendages attached to it. Two ovaries situated above the womb, one on either side ; and two ducts, one extending from either side of the body of the womb, and terminating near the ovaries, with an aperture having fimbriated edges.

The ovaries perform the same part in the female organisation that the testicles do in the male. Each is necessary for the formation of a perfect animal, because no animal can be perfect without the power of reproducing ; and when deprived of these organs, neither male nor female can produce offspring.

The ovaries derive their name from ovum, an egg ; and consist of small oval bodies, enclosed in cysts, simulating eggs ; and when conception takes place, one of these cysts is seized by the fimbriated mouth of the duct on that side, and conveyed to the womb, as the germ of the future human foetus or infant.

The oblong fissure, called the "vulva," having two lips or folds on each side, the inner being sometimes so small that they are barely perceptible, but occasionally standing out prominently, leads to the entrance, called the "vagina."

At the anterior part of the vulva, the urethra, or water passage, is situated ; and immediately above it there is a small eminence, called the "clitoris," occupying the place of the male "penis," and in some rare instances, being enlarged, simulating the penis, and producing what has been fancifully called an hermaphrodite. One case of this kind occurred to me, in a woman lately married. The clitoris was very much enlarged, about an inch long, the vulva, or oblong fissure, being natural ; but the vagina, or entrance, was not developed, nor

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was there any evidence that the womb existed. It was impossible for this person to produce offspring ; and, instead of being of both sexes, she would be more properly termed of no sex.

At the posterior part of the vulva, or oblong fissure, a fold of membrane, called the "hymen," or "maidenhead," unites the two sides together, leaving only a small aperture below the urethra, leading to the vagina. This membrane in some females is absent, and in others it is too perfect, leaving no aperture to the vagina, and causing a very serious affliction, to be noticed when we treat of the diseases of these parts.

THE MENSES, OR MONTHLY COURSES.

The nature and origin of this discharge were formerly considered doubtful, some attributing it to the womb, and others to the vagina ; but it is now ascertained to be a secretion by the womb, just as gastric juice is secreted by the stomach. It is a dark fluid, simulating a mixture of mucus and venous blood ; but it does not coagulate or form clots as blood does.

We have evidence that it is a necessary accompaniment of the power of reproduction, because it does not commence till the period of puberty, and terminates when women cease to conceive. This period varies considerably in different climates, and in different constitutions. In temperate latitudes, females commence to menstruate from fourteen to eighteen years old ; and cease from forty-five to fifty. But in hot climates they commence sooner, from twelve to fifteen years ; and cease from thirty-five to forty years. There are some cases on record where menstruation commenced at eight and ten years ; but not in my experience.

I attended one woman who menstruated at twelve years of age, and gave birth to her first baby before she was fourteen. And I attended another who gave satisfactory evidence that she was in her fifty-fourth year when she produced a fine daughter, she having borne eight children previously, and her youngest being then seven years old. The former patient was a native of Australia, and the latter of Ireland.

As an exception to the rule, Sir Everard Home gives a case in which the menses commenced for the first time after the birth of more than one child ; the second pregnancy having taken place during the period of suckling, when women do not generally menstruate. And Professor Frank mentions a patient who bore

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three children, and never menstruated either before or afterwards. In the circle of my acquaintance, a lady who had never menstruated before marriage, became perfectly regular during the life of her husband ; but after his death she ceased to menstruate during her widowhood, and on marrying a second time she again menstruated regularly, while she had no family by either husband.

This secretion is called menses, from the Latin word for month, because it returns every four weeks. And its approach is indicated by fulness of the bosoms, flushings of the face, pain in the back, and a sensation of weight in the region of the womb.

AMENORRHOEA, OR "GREEN SICKNESS."

As this secretion is an essential accompaniment of the female constitution when arrived at maturity, we can easily understand that its absence must be injurious to the health and happiness of the individual. But the sympathies are so extensive and numerous, and the effects often so striking and even alarming, as in some instances to seem almost incredible by the inexperienced.

The menses, or monthly courses, may be retained and absent from different causes. They may be tardy in their approach, owing to natural weakness of constitution and the want of proper development, and sufficient vital energy in the parts implicated.

Secondly, the menses may have been secreted for a time, and their recurrence prevented by exposure to cold, or some other cause of slight inflammation.

Thirdly, they may have been secreted, and retained by an imperforated hymen.

Fourthly, they may not be secreted, by reason of occlusion of the mouth of the womb.

Amenorrhœa, of the first class, from debility of constitution and insufficient development of the sexual organs, is rare ; but cases do occur in which the period of puberty is protracted for some years later than usual by these causes, and also by plethora, or superfluity, in the circulation.

Treatment.—In the management of this and all other maladies, it is well to keep in mind that the power of Nature in the cure of all diseases is far greater than most persons imagine ; and, excepting cancer and other malignant affections, that the tendency of every derangement of health is to recover by the natural efforts of the constitution.

The most successful medical practitioners, therefore, are not those who bleed largely, and give large doses of mercury to reduce the constitution, or who give stimulants to excite the nervous system ; but those who, by a constant study of Nature's plan, endeavour to imitate her ; and who give medicine only when they see that it is required to assist Nature.

The constitution of the patient should direct our treatment in every case of retention of the menses. If the patient has arrived at the age of puberty, say fifteen or sixteen, and if the bosoms be little developed, the countenance pale, and the muscles flaccid, there is good reason to attribute the retention of the menses to debility of the constitution, and deficiency of red blood.

To abstract blood from such a patient would defeat our object and retard improvement. We must endeavour to improve the state of the blood by light nourishing diet, plenty of exercise in the open air, especially on horseback ; a shower bath every morning, tepid in winter and cold in summer ; a warm bath for the feet every night in winter, and twice a week in summer ; together with cheerful society of persons about the same age, and of the male sex.

Stimulants, as ale, porter, wine, or spirits, are perfectly unnecessary, and generally injure such patients ; but tonics are always useful, and iron suits the greater number. Ten drops of the solution of the perchloride of iron should be taken through a quill or glass tube, in a wineglassful of water, after breakfast and dinner, the bowels being regulated by two grains of aloes and ten of Epsom salts, taken in syrup or pills, at night, as often as required ; but drastic purgatives should be avoided.

Travelling by short journeys, so as not to fatigue, is also commendable, the change of air, scene, and society, being highly conducive to health and the improvement of the spirits. Such means should be persevered in ; and the benefit may be increased by the application of a mustard plaster placed over the lower part of the bowels, immediately over the bony pelvis, and extending across to each groin.

This should be applied occasionally at night, when pain of back or loins indicates that nature is making an effort, and it should be kept on for half an hour, till it causes redness of the surface, and repeated three nights in succession ; but the patient must not go to sleep with it on, else it would inflict a severe blister.

But all the long list of the so-called emmenagogue medicines, or drugs to excite the flow of the menses, are best dispensed with,

some of these are very dangerous, and when administered by quacks, or well-meaning, but ignorant friends, often do much injury to the constitution.

If the menses be tardy in appearing, the patient being plethoric, and robust in constitution, and the bosoms well developed, at the period of each natural effort, indicated by pain of back or loins, and flushing of the face, a warm bath should be given every night, for three nights in succession, and, after the bath, three or four leeches should be applied to each groin, the bleeding to be encouraged by fomenting with a sponge pressed out of hot water. The patient should also get half a grain of podophylline, and ten grains of Epsom salts, in syrup or pill, at night, twice in succession.

These means should be repeated every four weeks, until the menses appear; and, after they do appear, a warm bath should be taken at night, at the approach of each period, for some time afterwards. The food of such persons should be very light, principally farinaceous, and alcoholic stimulants, as ale, porter, wine, should be avoided; exercise on horseback should be taken freely; cheerful society, especially that of the male sex, should be indulged in; sea-bathing ought to be taken in summer, and in winter a warm bath for the feet at night. But stimulating emmenagogues, as savin oil, and tincture of Spanish fly, are pernicious.

AMENORRHEA OF THE SECOND CLASS.

The absence of the menses, or suppression of the secretion, by a sudden stoppage while they were present, or by a want of recurrence at the proper period after they have been secreted, is still more serious and important.

Such suppression does not occur generally from any constitutional weakness, or inability in the organs implicated to perform their part. On the contrary, it is usually caused by an obstruction to the efforts of nature, which is soon resented by the combined sympathy of the entire constitution, or female system.

The commencement of this secretion is a critical period to every young female, and mothers, and those having the care of young girls, should be made aware of the necessity for attention to those entrusted to their charge, because many a lingering illness and premature death have resulted from indiscretion, and unnecessary exposure to cold, during the first months of menstruation.

The menses at an early period seldom recur regularly at the end

of every four weeks. The constitution seems to require the influence of habit to establish regular returns ; and, until this habit is fully and perfectly confirmed, slight causes, that might not afterwards be injurious, may then induce perfect suppression.

Exposure to cold or wet while the menses are present ; damp feet, sitting on damp ground or a cold flag ; standing in a draught or current of air when the body is overheated ; a fit of passion, or a sudden fright, any one of these may cause an immediate cessation of the menses, and all the miserable consequences which usually follow this unhappy event.

The natural modesty of young females tempts them often to conceal their state, even from their sisters and companions, and to take a cold bath, or perhaps a fatiguing walk, when warmth and quietness were alone suitable for them.

The discharge in some instances is also so trifling that it may escape the notice of an inexperienced young girl, who, therefore, may unwittingly expose herself to injury, the effects of which are always serious, and difficult to remove. Consequently, girls should be early made acquainted with the necessity for attention to their health in this particular, and the danger to be apprehended from any interruption to the menses, or monthly courses.

Constitutional symptoms do not immediately proclaim the absence of the menses ; but after the lapse of a few monthly periods, other organs indicate their sympathy with the state of the womb. The stomach is generally the first to give evidence of its condolence. The appetite fails, becomes capricious, and even depraved, so that patients suffering from this disease will often eat articles most indigestible, and, to others, unpalatable, such as chalk, cinders, &c.

The nervous system soon follows the example of the stomach. Its action becomes irregular and imperfect, marked by lassitude, depression of spirits, and a distaste for exercise ; accompanied often with neuralgic pains of head, back, or the hip joint. Nor does the heart fail to unite its sympathy, which is indicated by palpitation, or increased action, after the slightest exercise of the body, or agitation of mind.

Emaciation follows as a consequence of this depraved action of the constitution. The countenance, formerly cheerful and joyous, seems sad and depressed ; the step, lately elastic and nimble, is exchanged for a slow and tottering gait ; and the complexion of the patient is completely altered, becoming sallow, dark, or even

greenish in its hue, so as to have given this disease the name of chlorosis, or the "green sickness."

Suppression of the menses may also be caused by the debilitating effects of other diseases on the constitution. Phthisis, or consumption, seldom fails to produce a cessation of the natural courses in females; but such stoppages are less abrupt, nor are they followed by the severe symptoms already enumerated, nor equally felt and resented by the constitution.

Bright's disease of the kidneys has also been found to interrupt the return of the monthly courses; but here again the order is reversed, and the womb sympathises with the kidneys, that were previously diseased, in that particular case.

Pregnancy is well known to cause a cessation of the menses, for as soon as conception takes place vessels formed for the purpose throw out coagulable lymph, and seal up the mouth of the womb. But to this general rule there are exceptions, as some mothers continue to menstruate during the three first months of pregnancy, and others even for a longer period. The symptoms of cessation of the menses from pregnancy are, however, different from those of suppression caused by exposure to cold or other accident. It is true that during pregnancy the stomach generally sympathises with the womb, and often rejects food, causing the "morning sickness;" still the appetite continues, and the patient does not suffer very much from the temporary nausea; nor have we the depression of spirits, and other symptoms of constitutional suffering enumerated above.

Hæmorrhage, or a discharge of blood from the nose, stomach, bowels, or from any ulcer, has been reported by some as forming a vicarious substitute for the menstrual secretion. Such hæmorrhage occurred to some of my patients suffering from suppression of the menses, but not at regular periods, so as to enable me to look upon it as vicarious. On the contrary, it seemed attributable, in every instance, to the use of stimulants and rich food, forming more blood than the state of the system required, while suppression of the menses continued.

Treatment.—Plethoric constitutions and females of full habit require to be reduced by means that deplete or lower the circulation, and, on the contrary, delicate patients must be invigorated by such means as improve the state of the blood, and give tone to the system; and in this, as in every other malady, much is gained by early attention being paid to it.

If sudden suppression or stoppage of the menses occurs after they have been established, a warm bath at 100° Fahr. for half an hour, is equally suitable for every constitution, and if taken immediately after exposure to cold or any other cause of obstruction, it would often save the patient from a great deal of after suffering. Should one warm bath fail to restore the secretion, and bring back the menses, it should be repeated for three or four nights in succession, and aided, if the patient be delicate, by the application of a mustard plaster applied to the lower part of the bowels, immediately above the bony pelvis, to be kept on for half an hour, and, if necessary, repeated for three nights in succession; the bowels being regulated by two grains of aloes and ten of salts, in pills or syrup, given at night, if required.

But if the patient be plethoric or robust, the bath should be assisted by three or four leeches applied to each groin, and half a grain of podophylline, with ten grains of Epsom salts, should be given in syrup at night; and this treatment, if necessary, should be repeated three nights in succession, and again for three nights, every four weeks, for two or three monthly periods.

AMENORRHOEA FROM IMPERFORATE HYMEN.

Treatment.—The means directed for retention of the menses under the first class having, after a fair trial, failed to produce the desired effect, no delicacy of feeling on the part of the patient or her friends should prevent them from causing a doctor to ascertain lest there be some anatomical obstruction in the way.

Where this exists, medicine, in place of being useful, only increases the evil, while the delay caused by its application increases the danger that naturally must result from the obstruction.

In 1836 I was requested to see a young girl of sixteen years of age, robust and of active habits, being the daughter of a farmer, and accustomed to work in the fields. Her mother, although illiterate, possessed good sense, and told me that although her daughter's courses had often threatened to come, yet she had never "altered," and as she suffered pain of the back every four weeks, she had examined, and thought there was no passage for them.

On inquiry, her opinion was found to be correct. The hymen, commonly called the "maidenhead," filled up the entire passage, and was also unusually thick and firm, and, when touched, gave the impression that there was a quantity of fluid behind it. A free

incision being made through the membrane, about half a cupful of dark, thickish fluid escaped, and I directed that a little tepid water should be injected into the passage night and morning for a week, perfect rest being observed during that time. No inflammation followed the operation, and at the next regular period the menses flowed naturally.

Since that I operated on two children, one about three, and the other about five years old, who would have been similarly afflicted, had not their mothers noticed the obstruction in good time. One of these children had been previously operated on by a medical practitioner, but the edges of the incision had united again, which showed me that a cutting instrument is not suitable for children; and that it is better, with them, to rupture the membrane by pushing against it with a blunt instrument of the proper size.

During childhood this operation is simple and perfectly safe, but it should not be deferred to the period of puberty, because there are many cases on record wherein the operation proved fatal, when the menses had been retained, so as to distend the vagina, and in some instances, the womb itself.

AMENORRHOEA FROM OCCLUSION OF THE MOUTH OF THE WOMB.

An obstruction different from the above occurs to females, with whom the menses have been suppressed by exposure to cold, or some other accident happening at the monthly period. We stated already that, as a consequence of conception, the mouth of the womb becomes sealed up by vessels formed for the purpose, and the same thing that results from this natural process is often produced by slight inflammation.

To detect this obstruction requires an educated touch; but there is no necessity for the vaginal speculum, an instrument often used unnecessarily by charlatans, and always dreaded by females. Sight cannot serve us in such cases, for, on looking at the part of the womb that can be brought into view, the external mouth of the womb is open and appears natural, the obstruction existing at the termination of the neck of the womb, or its internal mouth.

When operating for this obstruction I have always preferred a silver bougie, or uterine sound, commencing with a smaller one at first, and increasing gradually till a full-sized instrument was admitted freely, and this had the desired effect. Patients who had

suffered for months, so as to be reduced to skeletons, fit for the grave, being soon restored to health, and rendered capable of enjoying life.

A similar obstruction occurs occasionally to women who have borne children, but have had a severe labour. When practising in Sydney in 1850 I had a patient of this class. She was a strong, healthy woman about thirty years of age, who had given birth to her first baby about two years previously. Before marriage, and up to the time she conceived, her menses had always been very regular ; but at her accouchement she suffered severely, as she reported, and was delivered of a still-born baby, from which time the menses had not returned. Every four weeks, she said, she had pain of the back, and such symptoms as made her expect her "courses," but they did not "come down."

On introducing a bougie, the obstruction at the inner mouth of the womb was so firm, that, assisted by Surgeon Nelson, I was obliged to pierce it with a pointed instrument, after which dilatation was kept up with bougies, twice a week for three weeks, when the menses appeared ; and the result was satisfactory, for in ten months from the return of the menses she gave birth to a living baby.

But the external mouth of the womb may be occult, or closed up, as the result of malformation. Two cases of this kind occurred to me in Sydney. One was the daughter of a gentleman who had studied medicine but did not practise it. This patient was about twenty years of age when I was consulted, and as I learned that all the list of emmenagogues had been tried by different practitioners in Britain, without any good effect, I suggested the propriety of ascertaining whether there was any anatomical obstruction. In this case the vulva and vagina were perfectly natural, but the neck of the womb, in place of terminating with an aperture about the size of a goose quill, was covered over with a strong membrane, and quite imperforated.

Assisted by the late Dr. Wallace, I pierced the membrane with a cutting instrument, and dilated with bougies every third day for nearly three months ; but the menses did not appear. She married shortly afterwards, but never menstruated, nor had she any family.

The second case of occlusion of the external mouth of the womb was in a hospital patient, about eighteen years of age, whom I saw in consultation with the Honourable Dr. Macfarlane. The appearances were exactly similar to those in the former case, and the want of success in it discouraged us from operating on this patient.

Obstructions of a still more unmanageable character are sometimes met with. Three cases, one unmarried female and two married women, occurred in my practice, in which the vagina or natural entrance was not developed. The vulva, or external lips of the privates, was perfectly natural; but the vagina, or entrance, was so contracted that a finger could scarcely be introduced, and only for about two inches. One of the married ladies, for whom I consulted with the late Dr. M'Keller, had a beard on the upper lip, a masculine voice, and a clitoris about half an inch long, simulating a small male penis; but the other two patients were perfectly feminine in their appearance, both as to their bosoms and in every other respect, excepting the want of development of the vagina, or natural entrance. There was no evidence that the womb existed in either of these three patients; but as each possessed a natural desire for matrimony, there was reason to conclude that the ovaries were formed. The menses never appeared with either of them, nor could any operation be serviceable to their case. One of them had occasional attacks of hæmorrhage from the nose, but not periodically, so as to entitle it to be considered a vicarious discharge.

These cases are given to show the impropriety of continuing to use emmenagogues and drastic purgatives in protracted cases, without inquiring whether or not there may exist some anatomical difficulty, which medicine could not possibly remove.

All the patients alluded to had been dosed immoderately, so that their constitutions were injured, and their happiness lessened, without the possibility of any benefit accruing from the severe treatment to which they had been subjected.

It may be well to add that the management of such cases should be entrusted only to medical gentlemen well educated, and known to possess sufficient delicacy of touch, to enable them to operate without the aid of sight. For patients suffering from such obstructions have, as a consequence, a deranged state of the nervous system, rendering them exceedingly sensitive and unusually irritable, and requiring great gentleness and consideration on the part both of friends and attendants, as also an avoidance of everything calculated to hurt their feelings.

Some patients cannot be improved by art, the malformation being too great to be removed by any operation, and for these we can only recommend strict attention to regimen.

Many practitioners advise the taking of blood from the system by cupping, leeches, or the lancet, applied periodically, so as to form a

substitute for the menses; but to me it seems much more rational to moderate the formation of blood by the use of light food, chiefly farinaceous, and by abstaining from alcoholic stimulants, as ale, porter, or wine.

The mind often suffers, or sympathises with such bodily infirmities, and requires the aid of society, change of scene, and constant employment, to prevent it from brooding over personal afflictions or misfortunes.

DIFFICULT MENSTRUATION, TECHNICALLY CALLED DYSMENORRHOEA.

Most females suffer some degree of pain or uneasiness on each return of the menses; but with some the extent of pain is inordinate, equal to that inflicted by a miscarriage. Nor is the suffering of such patients always transient, passing off in a few hours; on the contrary, it often continues for days and nights in succession, causing such agony as to make patients writhe with pain, and be covered with cold perspiration.

The attack commences with pain of back and loins, extending round to the lower part of the bowels, and frequently down the inside of the thighs. In some instances the stomach sympathises, and there is severe nausea and headache.

In addition to the effects of this malady on the patients themselves and those who witness their sufferings, it is calculated also to influence the increase of society, because few females produce issue who suffer from such difficult menstruation. They seldom conceive, and when they do, a miscarriage generally occurs about the third month.

This disease is evidently of the spasmodic character, and in all the instances that came under my notice seemed to be caused by one of the two following conditions—either an irritable state of the womb, causing it to take on an inflammatory action, and to throw out coagulable lymph on its surface, which is afterwards expelled in shreds or folds; or else a contracted state of the neck of the womb, impeding the passage of the menses, when secreted.

This inflammatory tendency affects the single as well as the married, and as the shreds that are expelled, and the pain suffered by the expulsion of them, often simulates an abortion, the character of unmarried females has occasionally suffered unjustly. For in some instances the coating of coagulable lymph is thrown off in one continuous fold, very like an early conception.

With such females the flow of the menses is always scanty for the first few days, and the pain generally subsides when they begin to flow more freely; but this rule is not invariable, as some patients continue to suffer severely even when the discharge is abundant, and accompanied with a quantity of red clotted blood.

Treatment.—Such means as are calculated to soothe the system and allay spasmodic action are most suitable during the attack. A warm bath at 100° Fahr., raised after a few minutes to 102°, and continued for twenty minutes or half an hour at the commencement of an attack, never fails to alleviate the suffering. After leaving the bath, the patient, being well dried, should go to bed, and keep up the soothing effects of the bath by the application of flannels wrung out of hot water, over the lower part of the bowels and the privates, renewing the flannel as soon as it gets cold, until the pain subsides or abates.

If the bowels are confined, it is a matter of great importance to have them relieved immediately by two pints, at least, of warm water and soap thrown up into the bowel as an enema, which may be repeated with advantage every evening. And in addition to this the patient should take two grains of aloes and ten of salts, in pills or syrup, every night.

The food should be very mild, chiefly farinaceous; and the best drink is weak cinnamon tea, which has a decided influence in lessening the irritability of the womb; or “imperial,” made by a little cream of tartar, water, the juice of an orange, and sugar to taste; but ale, porter, wine, or gin should be avoided by such sufferers.

The spasms with some patients are so severe that, to obtain sleep at night, an anodyne is required; and six grains of Dover’s powder, given in syrup, is the preferable form of opiate. And in such cases we usually find a considerable amount of fever; that is greatly improved by the acetate of ammonia. Of this a teaspoonful should be given in a cup of toast-water every four hours, as it increases the effect of the Dover’s powder, and hastens improvement.

Some patients cannot bear opium in any form, and to such I would give two grains of the extract of hyoscyamus at bedtime, or ten grains of camphor reduced to powder by dropping a little spirit on it, and then taken in syrup or treacle; and this dose of camphor may be repeated every eight hours till pain abates. By these means much may be done to alleviate pain, and moderate the spasms; but, to prevent the recurrence of such attacks, we must endeavour to improve the constitution and the state of the womb.

Females who suffer from difficult menstruation are generally dyspeptics, with whom the blood is in a deranged state, owing to their food not being properly assimilated, so as to produce healthy chyle. To alter this state of things it will be necessary to look back to the article on dyspepsia, and to attend to the directions given there for the management of the stomach and the other digestive organs. For it is certain that the womb sympathises as fully with the stomach, and suffers as much from a deranged state of the blood, as does any other part of the frame.

When shreds of false membrane are thrown off, we invariably find that the patients are naturally of an excitable temperament, as well as suffering from dyspepsia, and, in addition to the rules given for dyspeptics generally, it is necessary to state that travelling and change of air, together with exercise on horseback, if liked by the patient, are particularly salutary in this affection.

It is certain that when the womb is irritable many cannot enjoy exercise on horseback, and some are injured also by the jolting of a carriage, if the springs be stiff; and for such patients we can only advise exercise on foot by short but frequent walks in the open air. Nor can such sufferers be too careful to avoid every cause of anxiety and annoyance, because irritation of mind has a marked influence in keeping up this malady.

For lessening this irritability and inflammatory tendency of the womb great benefit is derived from thirty drops (half a teaspoonful) of the compound tincture of guaiacum, taken in a wineglassful of sweet milk after breakfast, and two grains of the iodide of potassium in a wineglassful of water after dinner, the bowels being regulated by two grains of aloes and ten of salts at night, when required. These medicines should be taken regularly for two or three months in succession, until the state of the womb is improved; and afterwards for three or four days previous to each monthly period.

If no shreds of coagulable lymph are thrown off, there is just reason to conclude that the spasms are caused by obstruction in the neck or at the mouth of the womb, and a medical practitioner of experience should be allowed to ascertain whether or not this is the cause of suffering; nor should any false feeling of delicacy be allowed to prevent this necessary inquiry.

There is no necessity for the use of the vaginal speculum for this purpose. An educated touch is quite sufficient to enable any person of moderate experience to do all that is required. The womb being two-and-a-half inches long, a uterine sound or bougie, when intro-

duced, should penetrate at least two inches; and if it does not, there must be obstruction at the mouth of the womb.

A silver or metallic sound seems preferable to the gum elastic used by some, because the former can have notches on its side to indicate the length it has penetrated; and its firmness enables us to alter the position of the neck of the womb, so as to bring it into a straight line with the body of the womb.

In all the cases that came under my care, except one case of contracted neck, the obstruction was at the internal mouth of the womb, and in some instances the obstacle was so firm that it required some perseverance to overcome it; but by using a small bougie at first, and afterwards dilating every third day, till a full-sized No. 12 bougie could pass freely, the difficulty was got over; and females who had formerly been tortured at each monthly period, menstruated afterwards without pain, while some who had been barren for a number of years produced healthy children.

When the neck of the womb is too narrow, causing an obstruction to the flow of the menses by reason of the smallness of the passage in its entire length, dilating with a bougie is seldom sufficient, and it is better to operate with Dr. Simpson's hysterotome, which is a knife with a concealed blade; or else with Dr. Routh's improved instrument, which has two blades. This instrument is introduced as the bougie, until the shoulder presses against the mouth of the womb, when, by pulling the handle, the blades are pressed out, and, on withdrawing the instrument, make an incision on each side of the neck.

These incisions must be kept open by introducing a bougie every day for some time afterwards, or by introducing a tent made of sponge or sea-tangle, and renewing it every second day for two or three weeks, until the wounds are perfectly healed and the passage fully established.

After dilating with a bougie, little restraint is required; but if the hysterotome be used, the patient should be confined to bed for a week, at least, and be limited to farinaceous food only, lest inflammation supervene. Unless the bowels act naturally, a teaspoonful of Epsom salts should be taken every morning, in a tumblerful of water, as the neutral salts act better when largely diluted.

EXCESSIVE MENSTRUATION, TECHNICALLY CALLED
MENORRHAGIA.

The amount of menstrual fluid secreted by different females, although they may be placed under similar circumstances, varies very much, according to the constitution of the individual ; so that the term excessive or profuse can be applied only comparatively.

The average quantity that appears at one monthly period is taken to be about six ounces ; but some females will lose thrice that amount without inconvenience, and others, in perfect health, may not secrete two ounces at any period. The healthy peasant girl who labours in the open air is so little inconvenienced by the quantity, that she seldom requires a napkin, the little secreted passing off when the bowels are relieved.

The time occupied by each monthly period varies also very much in different constitutions. About four days is the average duration of the menstrual flow ; but with some it may terminate in one day, while with others it may continue for ten days, so that one period is scarcely well over till the next is approaching. And this variety may occur in constitutions exceedingly different, as we meet with it in the pale and emaciated, as well as the florid and robust.

The extreme on either side is not conducive to health ; but until the constitution appears to suffer, there is no reason why we should consider it a diseased action.

We have reason to consider that the natural object or use of this secretion is to suit the womb for being impregnated, and as we find conception taking place in both extremes, there seems no reason why Nature should not be permitted to accomplish her work in her own manner. But cases do occur wherein the interference of art is absolutely necessary to stop hæmorrhage and the wasting of the constitution.

We stated already that the menses are not blood, that they do not coagulate or form clots, so that when red blood or clots appear, we have more than the healthy action of the womb requires, we have hæmorrhage, to some extent.

If this be considerable, it soon reduces the strength and produces debility, and the more readily when it occurs to persons whose blood is too thin and their systems relaxed. But the robust suffer also from profuse menstruation, accompanied with hæmorrhage ; for, as "the blood is the life of the animal," none can bear the waste of this vital fluid with impunity.

The causes of this hæmorrhagic menstruation are very varied. In some robust constitutions it is the result of luxury, from females eating too rich food, using alcoholic stimulants, indulging in indolence, and consequently making more blood than the constitution requires, or can bear, without exercise.

In the emaciated, we find it invariably accompanied with dyspepsia and a diseased state of the stomach, liver, spleen, or kidneys ; and also a relaxed state of the womb, associated frequently with ulcers on its mouth.

And in any constitution it may be caused by dancing, or too much excitement, during a period ; while it may also be produced by cancer, or a polypus, or fibrous tumour in the womb.

Treatment.—In all cases of profuse menstruation, rest in the horizontal position is indispensable, together with perfect quietness, a cooling regimen, and cold local applications.

If the patient be of plethoric habit, indicated by a florid countenance and considerable muscular development, the scale of diet should be low, chiefly farinaceous ; coffee is not suitable, the tea should be black only, and in small quantity ; and the drink should be cinnamon-tea and “imperial,” made with a little cream of tartar, water, juice of orange, and sugar, to taste ; while alcoholic stimulants are abandoned, and all fluids taken nearly cold.

As a local application, broken ice enclosed in a dried bladder or bag of oiled silk, should be laid over the lower part of the bowels, and between the thighs ; and, if this cannot be had, cloths wrung out of cold water, and changed often, should be used similarly ; but cold without moisture is preferable. The best bed is a hair mattress, and the apartment should be cool and well ventilated.

The liver in such cases is generally congested, and to relieve it the patient should have half a grain of podophylline and ten grains of salts in a little syrup at night, twice or thrice in succession, followed by a teaspoonful of salts in a cupful of infusion of cinnamon next morning, as cinnamon has a marked influence on the womb.

If the patient suffering from profuse menstruation be of a delicate constitution, indicated by a pallid countenance and deficiency of muscle, our treatment must be such as is calculated to improve the tone of the system and the general health. And for this purpose, rest and quietness being obtained, I have found most benefit from two grains of the iodide of potassium in a wineglassful of water after breakfast, and half or one grain of quinine in pill after

dinner ; but if quinine disagrees, a wineglassful of infusion of chiretta or quassia should be substituted for it.

Constipation should be prevented by two grains of Socotrine aloes and ten grains of salts, in pills or syrup at night, when required.

The food should be light and easily digested, alcoholic stimulants avoided, and the drink should be similar to that advised for plethoric patients ; but nervous patients should take Epps' cocoa in preference to tea, which is too exciting.

This treatment should be continued for two months in succession, and afterwards repeated a few days before each monthly period, until the discharge is free from clots, and reduced to a moderate quantity.

In the intervals between periods, constant exercise should be taken in the open air ; and the shower-bath should be used daily, tepid in winter and cold in summer, together with sea-bathing in the season.

As the mind has great influence on the female health, amusement should be provided in some form ; and as the reading of sensational novels is pernicious to such invalids, cheerful society should be substituted. Travelling, if convenient, is highly commendable for such patients.

THE CESSATION OF THE MENSES.

This is another critical period in the life of the female sex, but the appointments of the Great Creator are all wisely regulated, and this change generally sets in gradually, lest the constitution should suffer a shock by the menses ceasing suddenly.

We noticed formerly that the menses cease generally from the age of forty-five to fifty years, while in some instances they stop as early as thirty-five, or may be continued till near sixty years of age. Now it is reasonable to conclude that the constitution, accustomed to this discharge for a number of years, must be influenced more or less by its cessation ; but this being natural, with proper care no injury need be anticipated.

We observed that at the commencement of the menstrual flow the constitution seemed to require the influence of habit, to establish a regular period, and, at its termination, time is also required to overcome this habit. Hence, when nature's work is done, and the menses cease for a period or two, the influence of habit causes a determination of blood to the womb, which frequently produces hæmorrhage.

This, if moderate, acts as a safety valve to the constitution, and, together with a little prudence, by observing perfect rest, and abstaining from rich food and alcoholic stimulants, enables the constitution to bear the "change of life" with impunity: so that the evils calculated on at this period are seldom realized.

The popular belief that cancer, and other diseases of the womb, always set in after the final cessation of the menses, is not well founded, because it is ascertained by practice that disease of the womb is more common before than after that period.

It is certain that the female constitution requires judicious management at this crisis. Robust women who continue to use the same quantity of rich food and stimulating drink which they formerly took with impunity while pregnant or suckling, or during the presence of their monthly courses, cannot fail to overload the sanguineous system, and to induce an inflammatory state of the blood. And delicate females, who are naturally susceptible of cold, and easily injured by watching or fatigue, although they may have escaped suffering while relieved by this safety valve, require, after the final cessation of the menses, to exercise an increased amount of caution, or else they must pay the usual forfeit by want of health.

Treatment.—It is only when the hæmorrhage or loss of blood is inordinate that the interference of art is required; but in some cases the loss of blood is so profuse and rapid as to threaten instant exhaustion, and to call for prompt attention.

To control the loss and spare the waste of this vital fluid, the patient should be placed in the horizontal position, on a hair mattress, in a well-aired room, and be kept perfectly quiet. Cold applications should be made by towels wrung out of cold water, placed over the lower part of the bowels and the privates; or, still better, by pounded ice in a dried bladder, or bag of oiled silk, placed similarly.

The acetate of lead, known as sugar of lead, has a marked influence in checking hæmorrhage of the womb, and five grains, dissolved in a wineglassful of water, with a teaspoonful of vinegar, and ten drops of laudanum added, should be given every eight hours, till the loss of blood abates, and then omitted.

The only drink allowed should be half a teaspoonful of cream of tartar, in a breakfastcupful of infusion of cinnamon, taking a wineglassful only at a time, when cold.

The food should be one teacupful of black tea, with dry toast, morning and evening, and a little rice boiled in water, and eaten

with milk for dinner. Coffee is not suitable for such patients, and nothing should be taken hot.

If the bowels are costive, they should be relieved by an enema of soap and cold water, a quart, at least, thrown up into the bowel by a syringe ; and half a grain of podophylline, with ten grains of salts, should be given in syrup or treacle, for two nights in succession ; after which the bowels should be regulated by two grains of aloes and ten of salts, at night, as required.

Should these means fail to arrest the hæmorrhage, we must plug the vagina, or passage, so as to stop the loss of blood. For this purpose a silk handkerchief should be dipped into sweet oil, and pressed up gradually into the vagina, so as to fill it up perfectly ; and if a small piece of ice be folded in the corner of the handkerchief, and introduced first, it increases the effect. This plug should be removed and a fresh one applied, night and morning, until the hæmorrhage ceases.

In some cases, after the loss has been checked, a little blood continues to escape on the slightest motion of the patient, which keeps up a constant feeling of danger and dread of evil consequences, that retard convalescence. Under such circumstances, the five grains of acetate of lead, with the teaspoonful of vinegar and ten drops of laudanum, should be taken every night, in a wineglassful of water, and the cream of tartar in an infusion of cinnamon should be continued daily. The half-grain of podophylline should be taken twice a week ; and these means, when properly applied, never disappoint.

When convalescent a more generous diet is required, but must not be adopted hastily ; for if the bloodvessels be filled too rapidly a relapse may ensue, or, if this does not occur, other constitutional symptoms are certain to be developed. Some of my patients who indulged their appetite too freely suffered from a succession of boils that were very annoying. Others had neuralgic pains of the head, back, and frequently of the joints ; while some got a severe rash, or eruption, on the inside of the thighs, extending frequently to the privates, and accompanied with great itching. For this rash, the best application is fluid ammonia or hartshorn, applied with the finger or a camel's hair pencil. It smarts sharply for a few minutes, but it cures the itching at once ; and if the rash be of the dry species, it disappears after a few applications ; but if it be accompanied with moisture or a discharge, it should be dressed with the iodide-of-lead salve, made with one drachm to the ounce of suet.

For the removal of boils, poultices must be applied, to encourage

them to suppurate, as directed in the article on boils ; and the blood should be improved by two grains of the iodide of potassium, in a wineglassful of water, after breakfast, and a wineglassful of infusion of chiretta or quassia after dinner. For the neuralgic pains the same medicines are equally serviceable, if the bowels be regulated as directed above.

THE WHITES, OR FLUOR ALBUS.

The vagina, or passage to the womb, is covered internally with mucous membrane similar to that lining the mouth, nostrils, and bowels, and is also subject to inflammation from cold, excess of venery, violence, as in rape, severe exercise on horseback, or a diseased state of the blood. Under such circumstances the natural secretion is increased, and a quantity of almost limpid, or whitish-coloured mucus is thrown out, and has obtained the familiar name of "whites."

As inflammation of the mucous membrane is always prone to spread, it generally extends from the vagina to the neck and body of the womb, exciting in the constitution throughout the usual sympathy with this part of the female organization, and causing this discharge to be justly dreaded by women, who while whites are present attribute all their ills to that cause.

But a relaxed state of the mucous membrane, from falling of the womb, or a polypus in its neck, may also produce an increased limpid discharge. Nor is the term whites very applicable to the discharge to which females are subject.

In colds affecting the head, when the mucous membrane of the nostrils is inflamed, the discharge is at first transparent or limpid ; but if the inflammation be not checked, pus or other matter is formed, and the discharge becomes opaque or yellow. A similar result is experienced from inflammation of the vagina, or female passage ; for, when severe, and of long continuance, the discharge becomes purulent, and in some cases very abundant, forming a drain exceedingly difficult to cure, and sufficient to weaken any constitution.

A limpid and frequently profuse discharge may occur also, not from inflammation of the mucous membrane of the vagina, but from the growth of a cauliflower excrescence on the mouth of the womb, which we mentioned when noticing the diseases allied to cancer.

The only discharge to which the term whites, or fluor albus, is properly applicable is not the most common, nor does it proceed

from inflammation of the mucous membrane of the vagina. It is caused by a diseased action of the secreting glands of the neck of the womb, and is always associated with hypertrophy, or enlargement of the neck and mouth of this organ, and general derangement of the female system.

This discharge is opaque and whitish, resembling a mixture of starch and water, or the white of egg slightly coagulated, and mixed with water, while in some instances it becomes white and tenacious. It is seldom abundant, nor does it prevent the flow of the menses, which may be quite regular, but it is generally accompanied with a feeling of falling down of the womb, together with pain of back and lower part of the bowels. It occurs most frequently in scrofulous habits, and is generally associated with painful menstruation.

Treatment.—As whites occur in constitutions which are robust and vigorous, as well as those that are weak and delicate, our measures must be varied to suit the patient, the origin, and the continuance of the disease.

If the attack be recent, and attributable to an unusual exposure to cold, fatigue, violence, or a deranged state of the blood, a warm bath at 100° Fahr. for half an hour is equally suited to either constitution; and if applied in good time, it would save many of the fair sex from months—perhaps years—of suffering and impaired health. After the bath the patient should go to bed, have an additional blanket, and take five grains of Dover's powder to encourage perspiration, which should be kept up for twelve hours.

Half a grain of podophylline, with ten grains of salts, should be taken in syrup for two nights in succession, and rest observed. The diet should be very mild, with very little fluid of any kind; and if thirst prevails, the drink should be made acid with cream of tartar.

As a local application, five grains of the acetate of lead, dissolved in an ounce of tepid water, and thrown up into the vagina with a female syringe, or five grains of sulphate of zinc used similarly, night and morning, has a good effect; but three to five grains of nitrate of silver (caustic), in an ounce of water, is more efficient in checking the discharge, and equally safe; but it stains linen.

But if the inflammation is accompanied with itching, nothing is so good as fluid ammonia (hartshorn), a teaspoonful in an ounce of tepid water, to be increased gradually to a dessertspoonful, if it does not smart too much.

These means must be persevered with till the discharge is

checked, care being taken to regulate the bowels with two grains of aloes and ten of salts at night, when required.

If the patient is robust, a spare diet must be continued for some time. Seasoned dishes, pastry, rich food, and alcoholic stimulants must be abstained from, as indulging the appetite is sufficient to aggravate the discharge, and renew the attack.

Delicate patients, while they take light, nourishing diet, should have a wineglassful of water, with two grains of the iodide of potassium, after breakfast, and a wineglassful of infusion of camomile or quassia after dinner, with moderate exercise in the open air.

When such discharges have been neglected and become chronic, stronger astringents are required. This is especially the case when yellow or greenish matter is formed. The nitrate of silver (caustic) is then preferable, commencing with five grains to the ounce of water, to be increased gradually to ten grains, and injected by a female syringe night and morning.

If the discharge is caused by a relaxed state of the mucous membrane, and falling down of the womb, a saturated solution of alum, as much as water will dissolve, and a decoction of oak or pomegranate bark, is the best form of injection, and should be used alternately night and morning.

When the discharge proceeds from a diseased state of the secreting glands of the neck of the womb, to treat it efficiently the medicine must be injected into the neck, which can be done only by an educated hand. For this purpose a small quantity is sufficient (one drachm), to be thrown up by a small syringe; and the best remedy I have tried is the iodide of lead, five grains suspended in an ounce of glycerine, one drachm to be injected daily. If this cannot be accomplished, a solution of the nitrate of silver, five to ten grains to the ounce of water, should be injected into the vagina by a female syringe every evening.

As this species of discharge is often associated with painful menstruation, it is necessary to ascertain lest the internal mouth be obstructed, and if so, to have it dilated by a qualified surgeon of experience in such cases, which being done, the discharge will soon cease. While under treatment the patient should have perfect rest, for the womb is often so irritable that even the erect position is scarcely tolerable.

To divert the attention of such patients from their own sufferings is an important object, which is best attained by well-selected books,

not sensational novels, together with well-informed agreeable companions.

VAGINAL DISCHARGE OF CHILDREN.

Female children of the strumous constitution are subject to inflammation of the vagina or privates, the discharge from which soon becomes abundant and purulent.

It may be caused by teething, exposure to cold, intestinal worms, scarlet fever, or a deranged state of the blood, the result of gross feeding ; but it simulates so closely other disease, obtained by contact with an unclean person, that even medical practitioners have been doubtful as to its origin ; and the character of persons who had associated with such children has been blamed unjustly.

Treatment.—The state of the stomach and bowels should be first attended to. Lest worms be present, a dose of equal parts of turpentine and castor oil should be given, two to four drachms of each, according to the age and strength of the child, to be repeated once a week if worms are troublesome.

The food should be farinaceous, with milk, all solid animal food being withheld.

From five to ten grains of the chlorate of potash should be given in a wineglassful of water, after food, thrice a day ; the smaller dose to a child of three years, and the larger to one of six years ; the bowels being regulated by one grain of aloes and ten grains of salts, in syrup, at night, if the bowels have not acted during the day.

The inflamed parts should be sponged with a solution of the sulphate of zinc, five grains to the ounce of water, morning and evening, care being taken to remove all the discharge from the part before the zinc is applied.

Should the lips of the vulva or privates become abraded or raw, they should be dressed with iodide of lead ointment, one drachm of the iodide to an ounce of rendered suet, to be spread on thick calico or linen, and kept constantly applied till the sores are healed ; for, if neglected, the raw lips might grow together, and cause perfect obstruction of the passage.

FALLING DOWN OF THE WOMB, TECHNICALLY CALLED
PROLAPSUS UTERI.

This is a very depressing and grievous affliction, which should be carefully guarded against by women, because when fully established it is too often incurable, the best-directed means of relief being only palliative, and also irksome to the sufferer.

It is caused by weakness of the ligaments that support the womb, together with relaxation of the surrounding soft parts below, and the weight of the bowels pressing on the womb from above. It is generally met with in females advanced in life, who have borne children, and have got out of bed too soon after their accouchement, before the ligaments are contracted, or the womb has returned to its natural size and weight. Nor has it ever occurred to me to be required to treat any unmarried, or sterile female, for this malady.

It is a disease principally of the working classes: after giving birth to an infant, being ignorant of the necessity for rest, they too often suffer from standing and exerting themselves too much, while the constitution is not in a state prepared for any effort. It may also be promoted by enlargement of the ovaries pressing on the womb, by severe cough following the accouchement, or by lifting a heavy weight while the soft parts are relaxed.

The usual symptoms of this disease are a sense of fulness and weight about the privates, dragging or bearing-down pains, and severe backache, accompanied with an abundant mucous discharge, caused by the inflamed state of the vagina, and called "whites." As the disease advances, a tumour appears at the orifice of the vagina, which, if not arrested in its progress, soon protrudes externally; so that the womb is often found excoriated by the friction of the dress, and sometimes even ulcerated.

The womb is, however, easily returned into the passage, unless it be allowed to remain exposed too long at one time; and as the menses generally continue regular, the woman may conceive. If this occurs, after the period of quickening, when the womb ascends above the bony pelvis, a natural cure is experienced, and the unfortunate sufferer gets a respite for some time.

Treatment.—Formerly the usual remedy for this affliction was a pessary introduced into the vagina, which was a rude, clumsy expedient, little better than the malady. In hospital practice it was not uncommon to find women having the vagina perfectly ulcerated

by wearing one of these instruments ; so that its removal was attended with some difficulty.

But surgeons of the present day adopt more scientific measures, and direct their attention to the great object to be attained in such cases, which is, to take off the weight of the superincumbent bowels, and to improve the relaxed state of the ligaments of the womb and the surrounding soft parts.

The former object is best accomplished by Hull's "utero-abdominal supporter," which effects a double service—the circular part bearing up the bowels, and the under strap supporting the womb. Spratt's "prolapsus spring truss" is also a very efficient instrument, calculated to give indescribable comfort to females suffering from this complaint.

When neither of these instruments could be had, I have frequently instructed a dressmaker to form a circular bandage of jean or strong calico, six inches broad, fitting tightly around the haunches and lower part of the bowels, but getting wider upwards, and laced in front, so as to bear the weight of the bowels up, and prevent them pressing on the womb. Attached to this circular bandage behind there was a bandage three inches broad, which, passing between the thighs, and having its end divided into two, was fastened by two buckles, on either side of the lacing, in front of the circular bandage ; and this narrow bandage had a cushion or pad covered with oiled silk attached to its upper side, and placed so as to press on the back part of the private to support the womb externally.

But if the patient is so poor and helpless that she cannot provide even a calico bandage, the only alternative is a pessary. Of these the circular is more easily introduced, but the oblong is more efficient, if the patient be intelligent enough to be able to manage it. She should be taught to place its long diameter from thigh to thigh, and not from front to back ; for in the latter position it would obstruct the flow of the urine and action of the bowels. And when selecting a pessary, care should be taken that it be not too large to irritate the passage, or too small so as to drop out.

There is no necessity for wearing the pessary while the patient is in bed ; it should, therefore, be removed every evening, and an astringent injection applied night and morning, as this gives the only hope of effecting a permanent cure ; and as the astringent causes the passage to contract, the pessary should be oiled each time it is applied.

It sometimes happens that women who are obliged to stand day

after day washing, or engaged in some other domestic labour, neglecting themselves, and ignorant of the consequences, allow the womb to protrude so far, that the part exposed becomes so swollen that they cannot push it back. In such cases the womb is often found ulcerated by the friction of the dress.

By applying a little ice or cold sponge to the part, and compressing it gently with the fingers for a few minutes, the blood is pressed out of it, and the reduction will soon be accomplished; and then the bandage, spring-truss, or pessary should be applied, the patient being instructed to remain in bed for some hours, till the irritation subsides.

To effect a permanent cure, two surgical operations have been proposed and performed. By one of these the mucous membrane of the vagina is made raw, and its edges united by sutures, so as to give support to the womb. By the other the external entrance, or vulva, is similarly united, so as to prevent the womb from protruding. But these operations are admissible only in cases of celibacy or widowhood, and seem to me so little eligible, that I have not practised them.

Owing to the extensive sympathy of the constitution with this state of the womb, falling or prolapsus of this organ often gives rise to a train of symptoms, difficult to account for, until the real cause is ascertained. Consequently whenever whites, or mucous discharge, is persistent and abundant, prolapsus may be suspected, and the necessary enquiries should be made.

Like other maladies, it is best treated in the early stage, and no feelings of delicacy on the part of either patient or medical attendant should allow this disease to make progress and become unmanageable by want of care in proper time.

TUMOURS OF THE WOMB.

A polypus forms occasionally in the womb, as it does in the nose and other parts. It varies very much in its texture, being sometimes soft and friable, and again firm and unyielding; and it may be attached to any part of the body of the womb or to its neck only. Its size is also variable, being sometimes not larger than a small bean, and frequently equal in bulk to two fists united.

When attached to the neck of the womb and projecting into the vagina it causes an abundant mucous discharge called whites, and when it proceeds from the body of the womb it is a constant cause

of hæmorrhage. If, therefore, the menses are excessive and accompanied with the expulsion of clots of blood, or if attacks of hæmorrhage from the womb occur in the intervals between the monthly periods, or if whites be troublesome, with a sense of weight or bearing down, the presence of a polypus is indicated, and the necessary examination ought to be made by an educated practitioner.

Treatment.—Neither constitutional nor local remedies seem to have any influence in preventing the growth of a polypus. To remove it by extraction is the only successful mode of treatment.

When the polypus is attached to the neck of the womb, and hangs down into the vagina, it is easily detached by a pair of small forceps, as its neck soon yields to a little torsion; nor is the amount of hæmorrhage to be dreaded. But before applying the forceps it is necessary to ascertain that the tumour is not formed in part by the inverted womb, as has occurred in some cases, from violent efforts of nature to expel the polypus. Any doubt can be removed by introducing a bougie into the mouth of the womb, and passing it up two and a half inches.

If the polypus be in the body of the womb, its removal is much more difficult; still, if the hæmorrhage be frequent or profuse, it must be accomplished, as the patient's life is in jeopardy.

The mouth of the womb should be gradually dilated by sea-tangle, or tents of sponge, until the position and extent of the polypus can be ascertained, when it can be removed by a pair of suitable forceps, twisting it from its base; or by the French *écraseur*, or by Gooch's cannulæ, armed with whipcord, the medical practitioner being best able to judge which instrument is most suitable for the peculiarities of the case.

FIBROUS TUMOURS OF THE WOMB.

These are fleshy excrescences which form both in the muscles of the womb and on its internal surface; and all females are subject to them from the period of puberty to the decline of life. They are mild and innocuous, never malignant, and become troublesome only by their bulk, and from their pressure on neighbouring parts.

When they form on the inside of the womb they give rise to frequent attacks of hæmorrhage, and often cause severe contractions of the womb, simulating the pains of parturition; and such tumours frequently increase to a large size, representing a conception at the full period of birth.

When they form on the external surface of the womb, on the posterior side, they cause the womb to fall backwards, producing retroflexion of this organ; and when they form on the anterior surface, they cause antelexion.

In the former case the tumour presses on the bowel, and causes a dull constant pain of back, extending to the thighs, together with a sense of fulness in the bowels, and a frequent desire to go to stool. In the latter case the pressure is on the bladder, producing a desire to micturate often, amounting occasionally to incontinence of urine.

On examining by touch, the mouth of the womb may be found in its natural position, the body being bent on the neck, owing to the weight of the tumour making it top-heavy; but the depending tumour is sensitive to the touch, and, when pressed by the finger, betrays the nature of the case.

Treatment.—When the flexion is forward and the tumour pressing on the bladder, pressure with the finger, while the patient lies on the back, elevates the body of the womb to its natural position; and by confining the person to bed in this position for a few days, the improvement thus made may be permanent.

When the flexion is posterior, and the tumour pressing on the bowel, the patient should be placed on her right side with the knees well drawn up, the face and body being turned towards the bed, and with the finger of the left hand in the vagina, aided by a firm bougie in the rectum or bowel, the tumour should be elevated to its natural position; and to retain it so the patient should remain in bed for some days, lying constantly on either side, and when changing she should turn forward upon her knees, lest by turning backwards the tumour might relapse.

Constipation in such cases should be prevented by frequent enemata of soap and water; and when the bowels are being relieved the patient should use a bed-pan, and rest upon her knees and elbows, lest by straining in the erect position she might renew the disease.

Modern surgery, aided by chloroform, has excised tumours of this kind; but so few of these cases have been perfectly successful, and there have been so many instances of tumours of this description declining, or even disappearing, after the "change of life," owing to the lessened determination of blood to the womb after that period, that such a hazardous operation cannot be recommended. Nor have I seen any decided benefit from the use of iodine, the bromide of potassium, and other remedies. Mild diet, abstinence from stimu-

lants, gentle exercise in the open air, and attention to the state of the bowels, are the most serviceable.

HYDATIDS OF THE WOMB.

The origin of hydatids was formerly unknown, but it is now ascertained that they are the product of the tapeworm, the eggs of which, being conveyed into the stomachs of human beings and other animals, form hydatids, which, having passed the first stage of their existence in one animal, afterwards become tapeworms in the bowels of some other animal. And in the article on internal parasites we noticed that the membrane which surrounds the hydatid, called the "germinal membrane," has the power of producing other hydatids, so that one hydatid the size of a nut may multiply and increase to the size of a man's head. And in this way the womb may be distended, simulating pregnancy at an advanced period.

As all females, the single as well as the married, are subject to this disease, and as the menses are obstructed by the presence of hydatids in the womb, it is sometimes exceedingly difficult to distinguish this disease from pregnancy. The symptoms are very similar in the first stage, as there is a desire to micturate frequently, caused by irritability of the bladder, pressed on by the enlarged womb, while the bowels become constipated from the same cause.

After the period of quickening, the absence of motion might be expected as a criterion; but even this is an uncertain guide, because females having hydatids or any tumour in the womb, often fancy that they are quite sensible of the movements of an infant.

Some practitioners say that the bosoms do not sympathise; but with this opinion I cannot coincide, as in the only case that occurred to me the bosoms were evidently enlarged, and the dark areola or ring around the nipple was quite distinct.

It is only when the womb begins to make efforts to expel its contents that we get any diagnostic mark or symptom sufficient to enable us to form a decided opinion. The period at which these expulsive efforts commence is very uncertain. It may occur between the third and fourth month, or it may be deferred to the sixth month, or even to the full period of gestation. When it does supervene, by the muscular contractions of the womb, some of the vesicles that contain the hydatids are ruptured, and a gelatinous, limpid fluid is expelled, which is easily recognised by any one familiar with hydatids.

Treatment.—To assist the womb in its efforts to expel the hydatids is the usual practice adopted, the mouth of the womb being dilated with sea-tangle, or tents made of sponge, until the hand can be introduced to remove the hydatids ; but this operation is not applicable till after the sixth month, as previous to that the womb is not sufficiently developed to admit the hand ; and even then the amount of hæmorrhage is hazardous.

It is safer to trust to the ergot of rye, and, having dilated the mouth of the womb with tents, to infuse a drachm of the powdered ergot in a breakfastcupful of boiling water, and give a wineglassful every fifteen minutes till the womb acts vigorously.

If any portion of the hydatid is retained in the womb, hæmorrhage is a certain consequence, and must be prevented by plugging the vagina with a silk handkerchief, moistened with oil ; which should be replaced every evening till the womb renews its efforts to expel its contents, when the ergot should be given as before.

Being convinced of the immediate, efficient, and salutary effects of the sulphate of copper, as in the case of hydatids of the tongue, reported by me in the article on tapeworm, and in some other cases which I have since seen in consultation, I would recommend this medicine in hydatids of the womb. Having dilated the mouth of the womb by tents, as above, so as to bring the hydatids into view by the speculum vaginæ, the mass of hydatids should be pierced by a long trochar, and about one drachm of a saturated solution of the sulphate of copper should be injected into it. This immediately coagulates the gelatinous fluid, converts it into a solid, diminishes its bulk, and kills the hydatids ; which, if not expelled by the contractions of the womb, would shortly be absorbed and disappear.

The gelatinous fluid which escapes from hydatids is easily distinguished from the clear fluid produced by cauliflower excrescence of the womb, which we mentioned formerly as one of the diseases allied to cancer. Because the fluid of the hydatids is of greater consistence, and appears only occasionally, as the result of contractions of the womb ; whereas the discharge from cauliflower excrescence is thin, like water, and is constantly present, or absent only by brief remissions.

Dropsy, formerly considered one of the diseases of the womb, must be attributed to the fluid of hydatids ; for, as the womb is not lined by a serous membrane capable of secreting fluid, such as the cavities where dropsical effusions occur, there seems no good reason why the womb should be subject to dropsy.

INFLAMMATION OF THE WOMB.

We meet with this in two forms, the acute and the chronic. The acute form may be caused by exposure to cold, by a deranged state of the blood, by over-fatigue on horseback, or by standing, walking, or dancing, during the presence of the menses.

It is indicated by acute pain of back, pain in the region of the womb, extending to the thighs, and accompanied with a sensation of bearing down, and heat in the parts. Severe attacks are occasionally ushered in by a rigor, or shivering fit, with quick pulse and considerable fever, requiring immediate attention; for, if neglected in the early stage, the inflammation is certain to terminate in suppuration, causing a discharge of purulent matter from the womb, which is very wasting to the constitution, and troublesome to the patient.

Treatment.—A warm bath at 100° Fahr., this temperature being kept up for half an hour, or longer, unless faintness supervenes, is the best means of checking the inflammation. After the bath, the patient, being well dried, should have an additional blanket, take six grains of Dover's powder, and two hours after it drink freely of warm toast-water, to excite perspiration. And about three hours after the powder, half a grain of podophylline with ten grains of Epsom salts should be taken in syrup, or, better, concealed between two layers of sugar moistened with water; to be followed in the morning by a teaspoonful of Epsom salts in a cupful of water, unless the bowels act.

If pain be felt on pressure over the lower part of the bowels, at the margin of the bony pelvis, after the bowels have been relieved, there is evidence that the inflammation continues, and from two to six leeches, according to the strength of the patient, should be applied to each groin, and the bleeding encouraged by sponging the leech bites with warm water. The half-grain of podophylline, as before, should be repeated every night, and the leeches next day, until the absence of pain on pressure gives evidence that the inflammation is subdued.

The food should be farinaceous only, and the drink toast- or rice-water, made acid with a little cream of tartar. And absolute rest in bed is indispensable, as walking, standing, or even sitting in the erect position, is injurious, and has often caused a relapse, when the patient was considered convalescent.

Solid animal food must not be indulged in until the patient can bear exercise in the open air, and then a wineglassful of infusion of

cascarilla, chiretta, or quassia, should be taken after breakfast and dinner.

CHRONIC INFLAMMATION OF THE WOMB

May be the result or sequel of an acute attack neglected or badly treated, or it may commence surreptitiously, with slight pain only; so that it is overlooked by the patient until it has formed a discharge from the womb that is often very obstinate and difficult to control.

It occurs chiefly to delicate constitutions, and is generally associated with dyspepsia and its concomitant constipation; while it unfits the patient for exercise, especially on horseback, and is most relieved and benefited by rest.

Treatment.—Having tried many remedies in cases of this kind, I would recommend one grain of iodide of potassium in a wineglassful of infusion of camomile or quassia after breakfast and dinner, the food being light, and such as the patient can digest easily, together with a hip bath at 95° Fahr. every night for the first week, and afterwards a shower bath every morning, tepid in winter and cold in summer.

As a local application, I place most confidence in the muriate of ammonia, sal ammoniac, one scruple, twenty grains of it dissolved in an ounce of warm water, and half to be thrown up by a female syringe into the vagina night and morning.

These medicines are sufficiently stimulating, and all alcoholic stimulants should be abstained from. Coffee is too heating for such patients, and black tea only should be used moderately; but if milk suits the stomach, it is preferable to either.

Such constitutions being prone to constipation, it should be prevented by two grains of aloes and ten of Epsom salts, in syrup or pills, if preferred, at night when required.

If these means be not sufficient to remove the discharge in the course of a few weeks, five grains of the iodide of lead should be suspended in a drachm of glycerine or sweet oil, and should be injected into the neck of the womb every second day by a medical practitioner, the other means being continued as before.

When the patient is convalescent, exercise daily in an easy carriage, change of air, and sea bathing in the season, are the most likely means to prevent a relapse.

IRRITABILITY OF THE WOMB.

This is one of those anomalous diseases which it is impossible to define, and equally difficult to treat. It is evidently neuralgic, and from the suffering it causes, and the sensations it excites, it frequently simulates organic disease of the womb and its appendages.

In the article on hysteria we noticed that this affection often simulates organic lesions of different organs—the lungs, spine, and joints, while no change of structure exists in any of these; and in like manner irritability of the womb will sometimes counterfeit inflammation, both acute and chronic, falling of the womb, and even cancer itself; while the most careful examination can detect no deviation from the natural state of the organ, nor any local cause for the suffering, which is often severe.

All females, both married and single, are subject to this affection, from the age of puberty to the “change of life.” The greatest sufferer in my experience was a maiden lady about the age of forty years. She had been a dyspeptic from childhood; menstruated with difficulty about eighteen, her pain being limited at first to the monthly periods, but gradually increasing the duration of its attacks until the age of thirty years, when the pain became unremitting, and varied only by occasional exacerbations.

Exercise of any kind increased her sufferings so much that it was difficult to persuade her to leave her bed, and when she did, the horizontal position was soon resumed on the sofa. Nor did rest remove the pain, as it would in inflammation of the womb, or in falling down of that organ; it only mitigated her sufferings, and rendered them more tolerable.

Some of my married patients attributed their irritability of womb to getting out of bed too soon after their accouchement; and as they had a sensation of bearing down when they stood erect, they always fancied that they suffered from prolapsus or falling down of the womb, although there was no evidence of displacement.

Treatment.—By the nature of this affection we are deprived of one of our best remedies in the treatment of derangements of the nervous system, because the patient cannot bear sufficient exercise in any form, and especially in the open air. The whole frame loses tone from want of the bracing effects of exercise, and the patient has too much time to brood over her misfortunes and afflictions, and by depending increases her nervous irritability.

To give employment in such cases, our best expedient is to recom-

mend cheerful society, and books of an instructive and amusing character, not sensational novels, which are always injurious to the nervous system.

As a medicine, I place most confidence in iron. Ten grains of the carbonate of iron, taken in syrup or treacle, after breakfast and dinner, has a good effect ; but most patients prefer ten drops of the solution of the perchloride of iron, taken in a wineglassful of water, after food, twice daily ; taking care to use a quill or glass tube, to protect the teeth from the acid.

The food should be light and easily digested, and such patients should avoid rich, made dishes, pastry, and pig's flesh. Broths and soups, if eaten at all, should have no vegetables in them, and be used very moderately ; and all alcoholic stimulants should be abstained from, as they all injure nervous subjects. A wineglassful of any light bitter, infusion of cascarilla, bark, or camomile, is greatly preferable.

Constipation of the bowels is a troublesome accompaniment of all affections of the womb, which it aggravates so much that it should be carefully guarded against. With some, brown bread, or a little gruel for breakfast, has a happy effect on the action of the bowels, and if they can be regulated by food it is the best method ; but in many constitutions other means are absolutely necessary.

An enema of soap and water, a quart at least, tepid in winter and cold in summer, thrown up into the bowel, regularly, after breakfast, induces a habit in the bowels to act at that time, and will suit in many instances ; but it can unload the lower bowel only, and in constitutions prone to constipation it must be aided by a mild aperient, taken occasionally. Two grains of aloes, with ten of salts, in syrup or pills, at night, acts mildly, and may be taken for any length of time, without losing its effect, or inducing any troublesome habit. And half a teaspoonful of Gregory's mixture is also a safe aperient ; but if used often, the dose requires to be increased after a time.

ULCERS ON THE MOUTH OF THE WOMB.

Abrasions of the mucous membrane covering the mouth of the womb are a frequent result of chronic inflammation of that organ, and other causes ; while their presence is often the reason why discharges from the vagina are so difficult to cure. That they were also prevalent in days of yore seems tolerably certain, but the

modern discovery or invention of the speculum vaginae has made them more familiar to our eye and ear than they were formerly.

By the aid of this instrument, the ulcerated surface can be effectually and safely brought into view, and by the application, with a camel's hair brush, of a solution of the nitrate of silver, ten grains to the ounce of water, or a saturated solution of the sulphate of copper (blue-stone), the ulcer is soon healed, and the patient may be cured in a few days of a disease that might otherwise have continued for as many weeks or months.

It is certain that the use of this instrument has been abused by charlatans; but in the hands of a properly educated surgeon it is capable of doing a service to many of the fair sex when suffering from affections of the womb.

In the absence of this instrument, or a fit person to apply it, if the patient suffers pain when the mouth of the womb is touched with the finger or in the act of sexual intercourse, the vagina should be injected by a female syringe, night and morning, with a solution of the muriate of ammonia (sal ammoniac), beginning with ten grains to the ounce of tepid water, and increasing gradually to sixty grains to the ounce of water.

If this has not the desired effect in a few weeks, five grains of the nitrate of silver, dissolved in an ounce of water, should be used alternately with the muriate of ammonia; sexual intercourse being abstained from meanwhile. And should this fail to effect a cure, five grains of the iodide of lead, suspended in an ounce of glycerine or sweet oil, should be injected into the neck of the womb, in the quantity of one drachm, each evening; the muriate of ammonia and nitrate of silver being applied alternately, in the mornings, as before.

In addition to these means, the patient should take two grains of the iodide of potassium, in a wineglassful of water, after breakfast and dinner. And the food should be mild and easily digested, avoiding made dishes, also pastry, and abstaining from all alcoholic stimulants.

As mentioned already, constipation should be guarded against, and exercise in the open air should be taken daily on horseback or in carriage, as walking fatigues such patients.

Change of air conduces much to recovery in this diseased state of the constitution, and sea-bathing in the season is commendable.

IRRITABILITY OF THE VULVA.

This is a serious affliction, which sometimes causes a great deal of

suffering in the early part of married life. Fortunately it is not very common, but it is necessary to notice it, because it is liable to be mistaken by the young husband for unnecessary coyness, or want of natural affection on the part of the bride, while, on the contrary, it merits a great deal of sympathy and forbearance.

It is caused by unusual firmness of the hymen, or "maidenhead," which does not yield to moderate pressure, and thereby prevents perfect intercourse. For the first night the pain is endured, under the impression that it is natural, and will be only temporary; but next day slight inflammation sets in, and the parts become so irritable that the most devoted wife shudders at the approach of her husband, and writhes with pain, in place of enjoying matrimony.

As in irritability of the womb, so likewise in this case, the acute pain is not accounted for by the local appearances; and we can only attribute the extreme sensibility to a morbid state of the nervous action of the part, influenced, perhaps, by constitutional irritability, it being met with only in nervous subjects.

Treatment.—A surgical operation is the only effectual means of curing this malady, and relieving from a continuance of such suffering. The patient being put under the influence of chloroform, the hymen and also the sphincter muscle of the vagina should be freely divided backwards, and then the wound should be plugged with surgeon's lint dipped in oil; which should be allowed to remain in for three days; and after that the wound should be dressed with iodide-of-lead salve, one drachm to the ounce of rendered suet, spread on surgeon's lint, and replaced daily, till the wound heals; care being taken to keep the vulva dilated by a plug while the wound is healing.

The patient must be confined to bed while under treatment, and if any irritability remains after the wound heals it must be overcome by dilating with bougies; but this I have not seen necessary, nor is it likely to occur if the sphincter is properly divided, and the edges of the wound kept apart till it heals.

IRRITABLE TUMOUR OF THE URETHRA.

On the verge of the urethra or water passage there forms occasionally a small red tumour, not larger than the head of a breast pin, but so exquisitely sensitive that the patient cannot suffer it to be touched. It might occur to any female, but my only patient was the mother of three children, the baby being lately weaned. At first she

complained of an unusual smarting when passing water, for which I prescribed an antacid ; but as this had no good effect, her husband requested me to see her, because he considered there must be some local cause. A small florid tumour was found on the edge of the urethra, and was touched with nitrate of silver to lessen its sensibility ; but this caused so much suffering that it could not be repeated ; and it was necessary to excise the tumour with a pair of curved scissors, and then to touch the base of it with a fine wire made red hot. The heated wire did not give near so much pain as the nitrate of silver had done, and the one application was sufficient ; nor was there any return of the tumour, the wound healing kindly.

INVERSION OF THE WOMB.

This may be caused by violent contractions of the womb when endeavouring to expel its contents, or by injudiciously pulling at the cord to remove the placenta or “after burden,” after the birth of an infant.

The inverted womb has been mistaken for a polypus in the vagina, from which it can always be distinguished by the absence of the mouth of the womb, which is turned up and concealed by the inversion. And this unhappy accident shows the necessity for an accurate examination before attempting to remove any tumour of the vagina, lest the womb should be excised by mistake.

Treatment.—When inverted, the womb is easily restored to its natural state, unless it be allowed to remain too long in that condition. The tumour, or inverted womb, should be grasped firmly in the left hand, and then with one finger of the right hand pressure should be made just in the centre, at the bottom of the tumour ; and by pushing with a finger gently but steadily up, the womb soon reverts to its natural position.

But if the placenta be still attached to the womb, it must be first pulled gently off, in order to lessen the size of the tumour, and to facilitate the replacement ; nor need the dread of hæmorrhage, by removing the placenta, discourage ; for the injury caused by delay is greater than the danger from loss of blood. And it is astonishing how well patients do recover after this serious accident.

Perfect rest and additional care are, however, necessary, lest inflammation should supervene. Stimulants should be avoided, and the food for the first week should be entirely farinaceous, and in

moderate quantity; and the bowels should be regulated by a tablespoonful of castor oil, given as required.

DISEASE OF THE OVARIES.

These bodies, as we have noticed already, are situated on each side of the womb, and being subject to constitutional influences at the monthly periods, from the age of puberty to the change of life, and especially so at the time of parturition, they are very frequently the seat of disease, including inflammation and consequent suppuration, tumours, cysts, and hydatids.

Inflammation of the ovaries often occurs after an accouchement, caused perhaps by pressure during the birth of the infant, or by cold from neglect or exposure afterwards. About the ninth day, when the womb has descended into the bony pelvis, a tumour is discovered at one or both groins, painful to the touch, and causing an unpleasant sensation on the inside of the thigh. The pain is occasionally acute, but generally it is dull and constant, with frequent acute twitches.

Treatment.—If the patient be robust, six leeches should be applied to the groin over the tumour, and bleeding encouraged by sponging the bites with warm water; but if the patient be delicate, two leeches to the affected side will be sufficient. Neglect in such cases is very reprehensible, as fever soon sets in, accompanied with loss of appetite, dry skin, and constipated bowels, and as suppuration may quickly follow, the life of the patient is seriously imperilled.

If the bowels be confined, they should be immediately acted on by an enema of soap and warm water, and a teaspoonful of Epsom salts should be given in a cupful of ginger tea, every eight or twelve hours, to keep the bowels open.

After the leeches, the lower part of the bowels should be constantly fomented with flannels wrung out of hot water, or a bran poultice may be applied to soothe the pain. And while pain on pressure, or by occasional throbs, continues in the tumour, the leeches should be repeated every day, and the fomentations also continued; but as soon as pain subsides, a plaster of iodide-of-lead salve, made with two drachms of the iodide to an ounce of rendered suet, spread on soft leather or thick calico, should be substituted for the fomentations, and kept constantly applied, until the tumours disappear.

Constant rest in bed, meanwhile, is indispensable, and the food should be farinaceous only, avoiding all alcoholic stimulants.

CHRONIC INFLAMMATION OF THE OVARIES.

This species of inflammation is often followed by suppuration, although the symptoms have never been so marked as to attract the notice of the patient until the tumour has increased so as to simulate pregnancy; and as this form may occur to the single as well as the married, the character of young females has sometimes been impugned erroneously.

Tumours of this kind have in some instances formed an attachment to the bowel, and by bursting into it, a natural cure was effected. More frequently the tumour increases, and distends the abdomen so much that tapping must be had recourse to. And as the feeling of fluctuation is very indistinct, the diagnosis is very perplexing to a young practitioner.

In my first case I was obliged to dissent from the opinion of two medical practitioners who were attending the patient, and who, considering it a case of conception, expected that at the natural period the tumour would be removed.

The patient, who was the mother of ten children, was convinced that her sensations were not those of pregnancy, and as she suffered a great deal of pain latterly, and was anxious to be relieved by tapping, I removed seven pints of well-formed pus at the first operation, four pints about three weeks afterwards, three pints about a month later, and two pints about three months from the first operation, after which she recovered perfectly, and lived for ten years.

SOLID AND CYSTIC TUMOURS OF THE OVARIES.

The ovaries are also converted into solid fibrous tumours, which are very variable in their growth, sometimes increasing rapidly until they fill the entire abdomen, and again assuming a chronic form, and remaining indolent for life, causing no greater inconvenience than their bulkiness.

Such tumours, by obstructing the free circulation of the blood, do occasionally cause anasarca of the lower extremities, and dropsy also of the abdomen, which is very persistent, requiring the patient to be tapped again and again, until the constitution finally succumbs by inanition.

The ovaries are also converted into cysts, containing fluid of varied consistence, or there may be a collection of cysts, each con-

taining fluid, so that one being tapped and emptied, still others remain, and keep up the disease.

One species, termed the dermoid cyst, has the power of producing hair and teeth. In the dead body I have seen perfectly-formed teeth in the ovary; and when practising in Sydney, in 1848, I tapped the wife of a mechanic for encysted dropsy. She was unusually timid, and, after the second operation, vowed she would never submit to another. Under these circumstances, I agreed to put a tent into the wound to keep it open, and allow the matter to escape when it formed, while I explained to her that this exposed her to the danger of some of the fluid getting into the peritoneum, and causing fatal inflammation. Still she preferred the risk to the pain of another tapping.

After the tent had been renewed a few times, which was done once a week, the fluid became thicker, and more like pus, and when pressing out the matter, something solid presented at the orifice; and when this was extracted by a pair of forceps, and washed in hot water, it was found to be a roll of hair as thick as a skein of strong silk, eighteen inches long, and of a light brown colour, similar to the hair of the patient's head. After this was removed, matter ceased to form, and the recovery was perfect.

Hydatids are also found in the ovaries, and often increase so as to simulate pregnancy at an advanced period, giving another proof of the necessity for caution when forming an opinion respecting the enlargement of the abdomen of females, as no other diagnosis is surrounded with so many tendencies to mistake or erroneous decision.

Treatment.—In the management of cystic tumours of the ovaries, little confidence can be placed in the action of medicine, whether applied internally or externally. The most active, as mercury, iodine, the bromide of potassium, muriate of lime, and drastic purgatives, too often injure the constitution, without improving the disease.

Nor should we be too hasty in evacuating their contents by tapping, because a natural cure has often been produced by the cyst bursting and discharging its contents by one of the natural outlets.

A patient of mine, who had suffered for two years from enlargement of the ovary on the right side, having placed a small stool on a chair to enable her to take down a volume from the upper shelf of a book-case, fell suddenly on the floor, and felt something bursting

internally. Next day the tumour had disappeared, leaving only a sensation of weight in the bony pelvis and around the fundament; and a short time afterwards a quantity of dark-coloured matter, very foetid, was discharged by stool, and continued so for some months, when the patient recovered without any further annoyance.

But if the size of the tumour be so great as to render breathing oppressive, or to cause anasarcaous swelling of the limbs by impeding the circulation of the venous blood, the contents of the tumour should be evacuated by tapping; and when the tumour consists of one cyst only, a repetition of this operation is often successful in establishing a cure.

After the contents of the tumour have been removed, some inject iodine into its cavity; but my experience does not enable me to recommend this plan. Better recoveries have occurred to me without it than by its aid.

Solid fibrous tumours are more amenable to the influence of medicine than are cystic tumours.

For the solid tumours the iodide of potassium, two grains in a wineglass of water after breakfast and dinner, is a safe and efficient remedy; and a plaster of iodide of lead salve, two drachms to the ounce, of rendered suet, spread on soft leather or thick calico, and worn constantly over the tumour, hastens the absorption. In any case where iodine seems to disagree with the patient's stomach, the bromide of potassium should be substituted for the iodide, but the plaster continued as before.

For the destruction of hydatid tumours of the ovaries I place most confidence in a saturated solution of the sulphate of copper, injected into the cyst. It immediately kills the hydatids, and converts the gelatinous fluid into a solid, which, if it be not absorbed, cannot increase, and may give no annoyance for life.

A part only of hydatid tumours can be removed by tapping, and the portion that remains soon increases again, so as to fill the cavity and require a repetition of the operation, unless something be injected to prevent its renewal. And from the trials made by me, and seen in consultation with other medical gentlemen, I am convinced of the efficiency and safety of a solution of sulphate of copper thrown into the hydatids.

In using this remedy I would not empty the contents of the tumour; on the contrary, as soon as the escape of the clear gelatinous fluid, containing hydatids, gives reliable evidence of the nature of the tumour, from one to two drachms of the saturated solution of blue-

stone should be injected through the canula, and the wound then closed up by adhesive plaster, nature being allowed to complete the cure.

Surgeons of the present day do not hesitate, however, to cut open the abdomen and excise ovarian tumours of every kind. But, in addition to the difficulty of diagnosing abdominal tumours being so great, that in some instances, after the abdominal cavity had been opened, and the risk of consequent inflammation incurred, no ovarian tumour existed, still there is an equally cogent objection to this operation, caused by the want of constant success.

Not more than half the patients operated on by the knife have long survived the operation, and more than that number have recovered by tapping or by a natural cure.

In well-selected cases, where the patients are otherwise healthy and strong, if anxious to run the risk, I would not dissuade the operation of excision; but I would not advise it, nor adopt it from choice.

ITCHING OF THE PRIVATES, OR PRURITUS.

This affection is often very annoying to females. It may occur at any age, but it is most frequent at the "change of life," or as an accompaniment of whites or purulent discharges; nor is it always limited to the external parts, but extending within the vagina, it frequently affects the entire passage, causing a sensation of discomfort almost intolerable.

In all the cases in my practice it seemed to proceed from acidity of the blood, caused by obstruction to the insensible perspiration; by eating food with too much seasoning or too rich for the individual; or by the use of ale, porter, and other alcoholic stimulants; together with the want of sufficient exercise.

Treatment.—If the itching is confined to the external surface it is easily cured by applying a little diluted fluid ammonia (hartshorn) with the finger or a camel's-hair brush, every eight or twelve hours, till the itching ceases, which it generally does after a few applications. If the surface be abraded, the smarting is sharp for a few minutes, and for some the hartshorn would require to be diluted largely; but the stronger it is the cure is the quicker, and a little smarting is pleasurable compared with the itching.

If the itching extends internally, the hartshorn must be injected by a female syringe; and when used in this way it must be diluted with water, beginning with twenty drops of diluted hartshorn to

a table-spoonful of tepid water, and increasing the strength gradually as the patient can bear the smarting, and repeating the injection into the vagina night and morning, till the itching subsides.

CANCER OF THE WOMB.

In the article on this disease, as it affects both sexes, we have stated the general treatment, and the most frequent results.

When it attacks the womb, the symptoms are a feeling of heat and weight internally, with occasional lancinating pains, accompanied with pains in the loins and extending to the thighs, together with frequent ichorous bloody discharges from the womb.

The menses are irregular in their returns, and excessive in quantity when they do appear; while the stomach, sympathising with the state of the womb, is irritable and capricious. On touching the mouth of the womb it is found to be thickened on one, or, perhaps, both sides, while its orifice is larger than natural.

At first the disease is generally confined to the neck and mouth of the womb; but the tumour soon increases, and may extend up into the body of the womb or down into the vagina, causing retention of urine, and also constipation of the bowels.

This malignant disease seldom appears before the age of thirty-five, and more frequently not till a more advanced period of life. It may attack single as well as married females; and the common impression is that mothers who have borne children are not so subject as those whose wombs have been sterile; but of my patients the greater number had borne children, and some had large families.

When ulceration, the second stage of the disease, commences, it is announced by a bloody and mucous discharge, characterised by its peculiarly fetid odour; and as the constitution suffers under such affliction, the sallow and dejected countenance is also indicative of the nature of the case.

Treatment.—As this is a constitutional disease, local applications have little influence. The state of the blood must be improved, in order to make an impression on the disease. The patient's diet should be mild and easily digested; all stimulants should be avoided; the residence, if possible, should be elevated, with a bracing, dry air; the mind should be employed by reading history, travels, and other entertaining works; and the patient should be amused and cheered by agreeable company.

As an alterative of the blood, I place more confidence in the

iodide of potassium than any other medicine. If given in the dose of two grains in a wineglass of water after breakfast and dinner for a month, and then after breakfast only, it has a decided influence in preventing the progress of the disease and lessening the discharge. When taken once a day after breakfast, it should be accompanied with a wineglassful of infusion of chiretta or quassia after dinner; and if thirst annoys, as is generally the case, the best drink is "imperial," made with hot water, cream of tartar, sugar, and juice of orange. The cream of tartar has a good effect.

To alleviate pain and induce sleep, anodynes can seldom be dispensed with; and as their use, when commenced, must be continued perhaps for months, it is necessary to select at first those which have least influence on the brain and in constipating the bowels; and they should not be used during the day, but reserved for the nightly exacerbations.

The extract of conium, or of hyoscyamus, either given in three-grain doses at night, has a soothing effect; but after some time the dose requires to be increased up to ten grains.

Indian hemp, technically called *Cannabis Indica*, in the dose of one grain, has a similar effect, but may require to be increased to five grains.

In the use of anodynes it is well to change the medicine occasionally, as the same medicine, given constantly, loses its effect; and in those lamentable diseases, for which art has yet discovered no specific, it is a great and important object to husband our resources, and not to apply the strongest at first, because after that a weaker would have no influence.

To alleviate pain and moderate suffering is next in importance to curing the patient; and where the disease is such that in the end it must prove fatal, it is a pleasing task to smooth the rugged path for the sufferer, and keep her as comfortable as possible.

To effect this it is always necessary to have recourse to opium when the case is prolonged, as other anodynes lose their influence. If the skin is dry, Dover's powder in ten-grains dose, given in a little syrup at bedtime, will generally compose the patient; but if not, half that quantity should be given after the expiration of one hour.

If the skin be moist, or if nausea prevail, the extract of opium will be preferable, in the dose of one grain, increased if required to three grains; or the muriate of morphia, one-fourth grain, increased to one grain.

As the ulcers increase, the attacks of hæmorrhage are frequently very alarming to friends and exhausting to the patient, making it necessary to control the loss of blood as speedily as possible ; and for this purpose the most efficient medicine is tannic acid, given in five-grain doses, in syrup or treacle, every six hours, till the loss of blood abates. Gallic acid used similarly, and in the same dose, is preferred by some ; and the acetate of lead, given in dose of three grains in a cup of tepid water with a teaspoonful of vinegar, is an excellent styptic ; but it is apt to lessen the appetite, and cause spasm of the bowels.

Internal remedies are, however, too slow in their action when the hæmorrhage is profuse ; and in addition to these we require some local application to stem the torrent, such as a decoction of oak bark, or a saturated solution of alum, half an ounce to be injected into the vagina every three hours till loss of blood abates ; or a piece of cotton saturated with either of these may be pressed gently but steadily up into the passage, and removed every twelve hours till the hæmorrhage ceases.

As mentioned in the article on hæmorrhage from the womb, a small piece of ice folded in the corner of a silk handkerchief, and introduced into the vagina or passage, seldom fails to stop loss of blood.

If plugging the vagina be adopted, care must be taken to have the plug removed every twelve hours, and to syringe the vagina with twenty grains of chloride of zinc dissolved in a pint of water ; or, if preferred, with two drachms of chloride of lime to a pint of water, always made tepid. If the effect of these is disliked, a teaspoonful of creosote may be dissolved in a pint of tepid water, and used in the same manner night and morning.

Constant attention to cleanliness in this manner is absolutely necessary to prevent the fetid effluvia, so very depressing to the patient, who has already too much to suffer.

With the hope of obtaining a radical cure, part of the womb, and in some instances the whole of this organ, has been excised ; but the result has been so seldom favourable that this operation cannot be recommended.

STERILITY OF THE WOMB.

Owing to the variety and number of diseases of the womb lately mentioned, it is only reasonable to conclude that barrenness must occasionally follow as a consequence of some of these afflictions.

The presence of the menses, or monthly courses, is justly considered necessary to render the womb fit to be impregnated. But it has been sufficiently ascertained that females have conceived and borne children who had never menstruated; and that many have remained barren with whom the monthly courses have been present at regular periods.

Painful or difficult menstruation, as we have noticed, is found to be opposed to conception; for when the menses are preceded by severe pain, and followed by the expulsion of clots, or red blood, if conception had taken place the embryo must be expelled by the contractions of the womb; and even in less severe cases an irritable state of the womb may prove sufficient to obviate the efforts of nature to reproduce the species.

Similar effects follow an inflammatory state of the womb, which causes a secretion of coagulable lymph, that is frequently thrown off in shreds, and occasionally in oval capsules, simulating an abortion. Females so affected seldom conceive, and if they do they are certain to abort, the womb being too irritable to prolong gestation to the full period.

Suppression of the menses may prevent conception by an anatomical obstruction, which is easily removed by a surgical operation; but any attempt to influence such difficulties by medicine is worse than useless.

Imperfect development of the organs of generation may prevent sexual intercourse, and thus impede conception. And some of these imperfections are easily cured, as we stated in the article on imperforated hymen; while others are beyond the power of art.

The vulva or passage may be irremediably imperfect; the womb itself may not be developed, or, if present, its orifice may be occult or shut up; and the ovaries may be wanting, or, if they exist, may be imperfect, and incapable of producing an embryo.

Treatment.—As both the increase and continuance of the human race, and also much of the happiness of married life, depends on the fecundity of the fair sex, the removal of impediments to this happy state is of general interest, and of the highest importance.

If the menses have not appeared at the usual period, the means directed in the article on Retention of the Courses should be used, according to the constitution of the patient; and these failing, a qualified surgeon should be allowed to ascertain whether or not there is any anatomical impediment in the way.

If the hymen be imperforated, or the mouth of the womb occult,

the necessary operation should be performed, and the difficulty being removed, nature will soon establish the courses.

Should irritability of the womb or a tendency to inflammatory action, indicated by pain at the menstrual period, together with excess in quantity, and the escape of clots or shreds of coagulable lymph be present, we must endeavour to lessen this irritability by a complete change of food and regimen. The patient should be restricted to farinaceous articles only, with milk if it agrees, avoiding everything calculated to excite the system, as tea, coffee, and all alcoholic stimulants; as also late hours, exciting games, and all agitation of mind, while plenty of exercise is taken daily in the open air, but never so as to fatigue.

Having practised in the North of Ireland, I know from experience, that irritability of the womb is rarely met with there, and that the peasants, who live almost entirely on vegetable food, have large families; while in Australia, where the order is reversed, and animal food is eaten thrice a day, the increase of society is limited, and a large family is the exception and not the rule.

When painful menstruation, termed dysmenorrhœa, prevails, and is accompanied, as generally happens, with whites, or leucorrhœal discharge from the vagina, the cause should be inquired after; and if this be a polypus in the womb, or an obstruction at the internal mouth of this organ, or a contraction of its neck, the difficulty must be removed by a surgical operation, before we can expect any improvement of the female health, or any increase of family. In the article on painful menstruation we have pointed out the means for removing these obstructions; but as every case and constitution have their own peculiarities, the surgeon who is qualified to operate should be best able to decide as to the most favourable method.

Imperfect development of the vagina in all the cases that occurred in my practice was irremediable, and could not be improved by art. In two cases there was evidence that ovaries were developed, because there was natural desire for matrimony; but in neither of these was there distinct evidence of the presence of a womb; and in one case there was no proof of the existence of either womb or ovaries, because there was no development of the bosoms, nor mark of a distinct sex.

The laws of conception are, however, influenced occasionally by causes beyond our comprehension or our power of search. Some married couples, both apparently enjoying good health, may cohabit for a number of years without issue, and be afterwards blessed with

fine children, owing, no doubt, to some change having occurred meanwhile in the constitution of one or both.

In 1834, I attended a man in a tedious case of remittent fever. He was a labourer, who had formerly enjoyed good health ; and his wife was active and robust, having borne one son only, then about nineteen years old ; and some twelve months after the recovery of her husband she gave birth to a fine daughter, her son being then twenty years of age. And in a number of instances I have attended mothers, who had been married from five to fifteen years, before they produced their first offspring.

We know also that either male or female may have issue by a first marriage, and none by a second, or the reverse of this may occur ; while the health of both husband and wife may have been perfect in either case. And this leads to the conclusion that to obtain a favourable issue from any union, the constitutions of each married couple must be suitable for each other.

In the aid of medicine little confidence can be placed for the cure of sterility, except when it is required to improve the general health. Constant attention to the state of the bowels is important, as constipation or the opposite is very unfavourable to a healthy action of the womb, and should be prevented by the means directed in the articles on constipation and diarrhœa.

Particular kinds of food have been extolled for their virtues in producing fecundity. Oysters, especially if eaten in the spawning season, pigeons, sparrows, and fresh eggs, are all supposed to make the eaters of them prolific ; and it strikes me that the latter merit the preference, as being the most nutritious.

PREGNANCY.

This is a particularly interesting period of married life, especially to the young mother ; and we shall, therefore, point out its symptoms, and some precautions calculated to prevent unhappy mistakes and their results.

In married women, who are otherwise healthy, suppression or interruption of the monthly courses is generally considered the first symptom of pregnancy ; and as it is known that after conception takes place, the mouth of the womb is sealed up, most writers on midwifery consider that the menses cannot flow during pregnancy. They admit that blood may escape from the vagina or neck

of the womb ; but they contend that it does not possess the characteristics of the dark menstrual secretion.

The absence of the menses during pregnancy is decidedly the rule ; while it is equally certain that there are many exceptions to this rule, and that some mothers do continue to menstruate after they have conceived ; in some cases for two or three months only, and in others nearly to the full period of gestation.

It is necessary to recollect that the flow of the menses may be interrupted by other causes ; by exposure to wet or cold, by unusual fatigue, by the influence of the mind, as extreme joy, grief, anger, or fear ; or by phthisis (consumption). So that neither the absence nor the presence of the menses can alone be taken as our guide ; but when accompanied with other symptoms, the absence of the menses may enable us to decide that conception has taken place.

The stomach early sympathises with the altered state of the womb, and the "morning sickness" is a distinctive mark of pregnancy. This sickness, although occasionally very distressing and persistent, is different from nausea caused by inflammation or relaxation of the stomach. When the stomach is affected by either of these, the appetite is generally destroyed, and the nausea continues after the contents of the stomach have been rejected ; but in the morning sickness the appetite continues, and, after rejecting food lately taken, the patient can eat again with natural relish. Hence it follows that the morning sickness seldom wastes the patient's strength, although it may be very constant and annoying.

Similar sympathy with the womb causes an increased quantity of saliva to be secreted, so that the patient is obliged constantly to spit, as if she had taken mercury. This symptom is not always present ; but when it accompanies suppression of the menses it is a corroborating evidence of pregnancy.

The bosoms sympathise also with the state of the womb, and most females have a sensation of fulness, or slight enlargement of the bosoms, at each monthly period. But in addition to the increase of size, most women during pregnancy have a dark coloured pigment, deposited around the nipples, forming a distinct areola or ring, which is, perhaps, the most certain diagnostic mark of pregnancy.

The presence of milk in the bosoms is sometimes noticed ; but this is a deceitful symptom, as it is occasionally produced by suppression of the menses from other causes ; and by applying a

child to the bosom, any female might be made to secrete milk.

Enlargement of the abdomen is a natural consequence of pregnancy; but it, too, is a very deceitful symptom, which may be caused by disease of the ovary, disease of the womb itself, or by the formation of some internal tumour, or by dropsy.

The movements of the infant in the womb after the period of quickening, which occurs about the end of the fourth month, are also calculated to deceive, because they may be simulated by flatulence in the bowels. Nor are the movements always perceptible to the mother herself; because some infants remain so perfectly still, that mothers could not be convinced that the baby was alive, until they heard it scream after birth; and if the mother wishes to conceal her state, and makes the muscles of the abdomen tense, the application even of a cold hand may fail to detect the motion of the infant.

The pulsations of the child's heart, when heard by placing a stethoscope over the abdomen, give reliable evidence of pregnancy. These pulsations and the dark areola around the nipples, are the only diagnostic marks that can be depended on in any doubtful case. But to detect the action of the child's heart requires an educated ear, and some practice in the art. If we have, however, enlargement of the abdomen, together with suspension of the menses, and the dark areola around the nipples, the evidence of pregnancy may be considered well established.

THE DISEASES OF PREGNANCY.

In pregnancy, the enlargement of the womb—situated, as it is, during the first months, within the bony pelvis, between the bladder and the lower bowel—is apt to cause two evil consequences, costiveness and retention, or difficulty of passing urine; and these two evils give rise again to three others—diarrhoea, piles, and retroversion of the womb; while, by sympathy, sickness of stomach is a general if not constant accompaniment.

Costiveness, by retarding the natural action of the bowels, causes the formation of scybalæ, or indurated masses in the large bowel or colon; and these balls of hardened fæces, by irritating the bowel, produce diarrhoea, or perhaps dysentery. And the same obstruction of the bowels, by preventing the free circulation of the venous blood in the lower bowel, may cause piles, either internal or external.

When retention of urine occurs early in pregnancy, the distended bladder, being placed in front of the womb, pushes it backwards upon the bowel, altering its natural position, and causing excruciating pain to the unfortunate sufferer.

Treatment.—The action of the bowels should be carefully attended to, and if they are not relieved naturally once every day, they should be stimulated by an enema of soap and water ; or by two grains of aloes and ten grains of Epsom salts, taken in syrup or in pills at night ; or, if preferred, by half a teaspoonful of Gregory's mixture. But the rhubarb in the latter soon loses its effect, and requires the dose to be increased, while the aloes is free from that objection.

If the bowels be not neglected, diarrhoea seldom annoys ; but if it occurs it should be controlled, because the tenesmus or straining might induce an abortion. A tablespoonful of castor oil, or half a teaspoonful of Gregory's mixture, should be taken to carry off any indurated fæces or indigestible food that may be irritating the bowels ; and afterwards, five grains of Dover's powder should be given in a little syrup every eight hours till pain ceases. Should the bowels continue relaxed after the pain is removed, a dessert-spoonful of chalk mixture should be taken thrice a day after food, until the bowels act naturally.

Nausea, or the "morning sickness," is sometimes very distressing, particularly when the stomach has been injured by indulging the well-known "longings" for indigestible food, or by the use of fermented liquors. It is most relieved by strict attention to the bowels as directed above, and by abstaining from rich indigestible food, as pastry, preserved and salted meat, and made dishes.

Idiosyncrasies of taste are so varied, under these circumstances, that it is impossible to prescribe any particular dietary, as the food relished by some might be very unpalatable to others. Some suffer least when restricted to farinaceous food with milk ; others prefer beef- or mutton-tea, or chicken-broth, to milk ; and many fare best when they take very little fluid of any kind, and eat principally roast fowl, beef-steak or grilled chop, and stale bread.

If the fluid rejected from the stomach be acid to the taste, half a teaspoonful of calcined magnesia in a little water or sweet milk corrects the acidity, and acts also on the bowels ; but if these be relaxed, the same quantity of precipitated chalk will control the lax, and suit better.

The medicine which I found most generally useful in preventing nausea, or the "morning sickness," was the tris-nitrate of bismuth

one-and-a-half drachms, water two ounces, and hydrocyanic acid twenty minims ; of which mixture one teaspoonful should be taken before breakfast and dinner, taking care to shake the bottle before use, and to keep it well corked. But neither food nor medicine will have the desired effect without regular exercise in the open air—on horseback, if accustomed to the saddle, or by carriage, or frequent short walks. The peasant who labours in the field seldom suffers from nausea.

Retention of urine, or inability to micturate during pregnancy, is caused by mothers, in the early stage, neglecting to pass water until the bladder becomes too much distended, so that its muscle loses the power of contracting to expel the urine ; the neck of the bladder being, meanwhile, compressed by the enlarged womb. Females travelling by railway, or at church, or the theatre, or at a picnic party, or a ball, are frequently exposed to this accident ; which is always serious in itself, and calculated also to produce retroversion of the womb.

Any patient affected in this way should sit for fifteen or twenty minutes in a warm hip-bath, and on leaving it should stand for a minute or two on a cold flag, or in a vessel with a little cold water in it, and then try to micturate. And if unable to do so, she should retire to bed, have an additional blanket, and take six grains of Dover's powder to cause perspiration, and make the skin relieve the bladder, till a doctor can be got to take off the water by a catheter.

Drinking meanwhile should be abstained from, as any kind of fluid taken into the stomach increases the evil, especially if it be accompanied with gin, sweet spirits of nitre, or anything to excite the kidneys to produce more urine, and thus increase the distension of the bladder.

The bladder, when paralysed in this way, does not recover its tone immediately, and should be attended to. In two hours it should be relieved again, and then every eight or twelve hours, until the patient can micturate. And she should be careful not to lie on the back, but on either side, leaning well forward, lest the womb be pressed backwards on the bowel.

When cases of this kind are neglected, and the bladder is distended to the greatest limit, the water begins to flow off by drops, without the will of the patient. Nurses are often deceived by this appearance, and fancy that, the water having commenced to come, it will soon flow naturally ; but the reverse is the case, because the paralysis is always increasing, while the nervous system is being

injured by the urea being absorbed and taken again into the circulation. If it were an object to make a book, multiplied cases of this kind might be enumerated.

Retroversion of the womb is the common consequence of the foregoing malady, and when it occurs it inflicts a great deal of suffering. If the bladder be emptied in good time, and the position of the body, as directed above, attended to, the natural position of the womb may be restored; but if pain continues after the bladder has been emptied, it is necessary that a medical practitioner of experience should raise the body of the womb from its false position.

This can be done by two fingers of the left hand, introduced into the vagina, and aided by a firm gum elastic bougie in the rectum or bowel, both acting together to push the body of the womb upwards. After this operation the patient should remain in bed for some days, and be careful not to lie on her back, lest retroversion recur.

Piles or hæmorrhoids during pregnancy are caused by the circulation of the venous blood of the lower bowel being impeded by pressure of the enlarged womb, or by constipation of the bowels. In either case a mild aperient is required, and none suits better than an electuary of sulphur—two ounces of sulphur and one ounce of cream of tartar, to be well mixed in a pound of treacle, of which a teaspoonful should be taken night and morning, so as to keep the bowels moderated. And for the local treatment we beg to refer the reader to the article on Hæmorrhoids.

The same obstruction to the circulation of the venous blood causes, occasionally, distressing itchings of the privates, which is soon cured by a little fluid ammonia (hartshorn) diluted with water, if it smarts too much, and applied to the itching surface with a camel's-hair brush or feather, night and morning.

Swelling of the lower extremities in the latter months of pregnancy is another consequence of the pressure of the womb, preventing the free circulation of the venous blood. And as occurs in other attacks of anasarca, when the swollen foot or leg is pressed with a finger, especially over the shin bone, a pit remains when the finger is removed. Young mothers seeing this are frequently alarmed; but it is easily removed by taking a teacupful of Epsom salts in a cup of ginger tea in the morning, and keeping the limbs elevated on a sofa or a chair, when the patient sits; while she is careful to avoid standing, and to keep moving as long as she is on her feet.

Toothache is a very troublesome and frequent accompaniment of pregnancy. If the tooth be hollow and the hole small, it should be

stuffed by a dentist; but to extract a tooth under such circumstances is not advisable, because the shock to the system might in some constitutions cause an abortion. If the tooth cannot be stuffed, the pain can be relieved by a drop of laudanum, applied with a writing-pen, or, if preferred, with a drop of kerosine or creosote.

A dry, teasing, and sometimes severe cough is another accompaniment of pregnancy, owing to the encroachment of the enlarged womb on the stomach and diaphragm, or large muscle that separates the chest from the abdomen, and which requires room to allow it to descend sufficiently in the act of inhaling air into the lungs.

This cough is in some cases very persistent and harassing, and although coughing is at any time severe and unpleasant, still at this period it is especially so, because the pressure of the womb on the bladder when the patient coughs causes an involuntary escape of urine, which keeps the unfortunate sufferer very uncomfortable, and is indeed truly afflicting.

To relieve this cough, I have found hydrocyanic acid, combined with syrup of squill, the best medicine. Twenty minims of hydrocyanic acid, half an ounce of syrup of squill, and one and a half ounces of infusion of cinnamon; and of this mixture a teaspoonful should be taken every eight or twelve hours, as required, to mitigate the cough, care being taken to keep the bottle well corked, and shake it before use.

The food of such patients should be very light, easily digested, and taken in small quantities, as a full or hearty meal is sure to punish.

Alcoholic stimulants should be abstained from, and if thirst annoys, the best drink is imperial, made with a little cream-of-tartar, hot water, sugar, and juice of orange.

PREGNANCY SIMULATED BY FALSE APPEARANCES.

The history of Joanna Southcot is familiar, and we know that the belief that she, a virgin, was pregnant with the "promised Shiloh," not only deceived her, but also the medical men that were consulted respecting her case. Still, it is reported that when examined after death, there was no enlargement of the womb nor of its appendages, and that flatulence of the bowels, together with an unusual deposit of fat in the abdomen, were the only causes that were discovered for her simulated pregnancy.

Similar appearances and disappointments do, however, occur to married women who have no wish to deceive. My notes furnish four cases. The first was a dispensary patient, the wife of a labourer in the North of Ireland, to whom I was called five nights in succession, she fancying herself as truly in labour as she had ever been with her previous seven children. On each occasion I found her suffering from spasmodic pains, but there being no other symptom of an approaching birth except the pain and enlargement of the abdomen, I gave an anodyne at my first visit, after which she had a good night. Next day, however, the patient was equally convinced of her pregnancy; was able to give the date at which she quickened; was quite certain that she had constantly felt the motion of the baby; and referred to feelings so similar to what she had formerly experienced, that it was impossible to alter her belief that she must either die or be delivered shortly.

Two professors under whom I had studied midwifery had not noticed this topic, and my inexperience, together with the patient's positiveness, made the case very embarrassing. But being unable to discover the beat of the child's heart, or any motion of a living baby, I was at length enabled to convince her that the appearances were deceitful.

Carbonate of iron, with aperient medicine to act on the bowels, soon improved her general health; the absent menses returned, and during my stay in that district, for three years afterwards, she had no birth.

My second patient was a shrewd woman, the wife of a mechanic in Sydney, and the mother of three children. In August, 1843, she came to engage me to attend her in her accouchement, which she expected early in October. About a month later her husband called me hastily, and she apologised for having miscalculated, saying she would not detain me long, as her pains were very severe. Having ascertained that her pains were merely spasmodic, I gave her an anodyne, and in a short time she was so free from pain that I left, telling her husband to call me, if pains returned before morning. Next day I found her up, and attending to her housewifery, and on examining with the stethoscope, no beat of a child's heart could be discovered, although she assured me that its movements had been not only distinct, but troublesome. The history of my first case being then related to her, she agreed to take a little medicine, which dispelled the flatulence and her hope of a baby.

The other two patients alluded to were in a different sphere of

life, highly intelligent, and possessing minds so well regulated that one might expect that their experience as mothers would prevent any misconception on their part, but they were only the more to be pitied, because their greater sensitiveness made them feel more poignantly.

In all the cases that came under my notice the flow of the menses was suspended, and to the absence of this indication of perfect female health may be attributed, in a great measure, the sensations and symptoms which combined to deceive these patients. In addition to the enlargement from flatulence and an increased obesity, the abdominal muscles had got into the habit of contracting, so as to give the impression of a tumour of considerable size in the abdomen, and to render the appearance of pregnancy very striking; and this spasmodic contraction of the abdominal muscles must be caused by reflex nervous action, resulting from the obstruction of the monthly courses, and the consequently deranged state of the constitution.

Treatment.—Aperient medicine of a stimulating character is requisite in these cases, and for removing flatulence oil of turpentine is worthy of confidence. If the bowels are tolerably active, it should be given in teaspoonful doses in a little sweet milk after food, morning and evening; but if the bowels are torpid, a tablespoonful, with an equal quantity of castor oil, should be given every morning or alternate day, until the flatulence subsides.

This point being gained, ten drops of the solution of the perchloride of iron should be taken in a wineglassful of water, through a quill or glass tube, after breakfast and dinner daily, while the bowels are regulated by two grains of aloes and ten of salts, in syrup or in pills at night as required.

Constant exercise in the open air, on horseback if liked, and if not, by walking or by carriage,—cannot be dispensed with, and change of air, with sea-bathing in the season, tends greatly to hasten the improvement.

PREGNANCY WITH THE FŒTUS IN A FALSE POSITION.

This is fortunately a rare occurrence, and is technically called “extra-uterine conception.” One case only occurred in my practice. The woman had been married ten or a dozen years without having issue, and when I was called to attend her in her accouchement, there was distinct evidence of a living baby in the abdomen;

but although the pains were frequent and severe, there was no dilatation of the mouth of the womb, nor other natural preparation for the birth of the infant. At a late hour that night I saw her again, and finding no improvement in the symptoms, while I was convinced that it was a case of extra-uterine conception, I gave an anodyne, and left with the intention of having a medical consultation next morning. But owing to the fact that the patient had been in the habit of taking laudanum frequently, the dose had no effect, and early next morning her husband came to request me to see her immediately, for that she was dying. I found his report too true, for when I arrived life was extinct; and, hoping to save the infant, I performed the Cæsarian operation, but when the baby was exposed, it too was still and bloodless, being exhausted by the same hæmorrhage that proved fatal to the mother.

In this case conception had taken place in the right ovary, the womb being unoccupied and in the virgin state. The placenta or network of bloodvessels that forms the medium of communication between mother and child was seated in the right iliac fossa, and being separated from its attachments by the contractions of the abdominal muscles, the poor woman died by the consequent hæmorrhage. It does not always happen so, as there are cases on record in which the infant died, and decomposition setting in, a communication was formed with the large bowel, and the bones of the fœtus were discharged piecemeal by stool, the mother outliving the suffering.

Treatment.—Two plans of treatment can be adopted in such cases, the expectant and the heroic. The Cæsarian operation of cutting open the abdomen and delivering the infant, when successful, is the best and speediest cure; but the operation is so formidable that most patients, relatives, and medical practitioners shrink from the responsibility of choosing it; nor can it be urged or even recommended, since much obscurity must surround every such case, and that as many mothers have recovered when left to the efforts of nature as have survived the Cæsarian operation.

To soothe pain by giving ten grains of Dover's powder every eight or ten hours, or half a grain of muriate of morphia as often; also by hot fomentations over the abdomen, and by keeping the bowels open by a mild aperient, or the frequent use of an enema, while the patient is confined to farinaceous food, is the most eligible form of treatment in such anomalous cases.

MISCARRIAGE.

When the womb rejects its contents, and the foetus is expelled before the sixth month of gestation, writers on midwifery call the event a miscarriage; but when a similar occurrence takes place after the sixth month, they term it an abortion or premature birth. For our practical purpose it will be sufficient to consider these terms synonymous, as we find them taken so in common use.

A miscarriage is always a very serious accident to the mother, because the process of nature is interrupted, the large quantity of blood sent for some months to the womb to promote its development and nourish the foetus is suddenly arrested, and, in addition to this, a severe shock is given to the nervous system, without the relieving consequences of the secretion of breast milk, and the joy a mother feels in the possession of her offspring.

The hæmorrhage or loss of blood at the time is often alarming, and although it seldom proves fatal, yet in many instances we can trace difficult menstruation, irritability of womb, and persistent ill health, to the date of a miscarriage; while by the same unhappy accident society has been deprived of a human being endowed with an immortal soul.

Every mother should therefore be particularly careful to avoid all the causes which are calculated to induce this catastrophe; and whatever tends to injure the health generally, or weaken the constitution, is also calculated to thwart the purposes of nature, and blight the prospects of the mother. In this list we may include constipation of the bowels, or diarrhœa; injury of the stomach by indigestible food or alcoholic stimulants; over fatigue by dancing or otherwise; and the passions of the mind, as anger, or extreme joy or fear. A sudden fright may be followed by an immediate abortion, and the sight of anything very disgusting, or the smell of anything that is very offensive may act similarly.

Mothers possessing a nervous, irritable, and peculiarly sensitive temperament are of necessity weak, and especially liable to suffer from dissipation or unusual excitement, and require constant care while they are in this interesting state; but even the strongest woman, by any excess or muscular effort, may excite such irritation of the womb as must be followed by an abortion.

Miscarriage is particularly prone to occur about the third month. The growth of the foetus, and the consequent enlargement of the womb, at this period causing an increased determination of blood to

this organ, add to its irritability ; make it in some instances resent further distension, and induce it to contract, so as to expel its contents. If this period can be tided over, gestation, in many cases, is prolonged to its end.

About the sixth month is another critical period. A still greater development of the womb and its contents takes place now ; and under the increased excitement, from the additional supply of arterial blood, contractile efforts and a tendency to abort are experienced.

It is a matter of immeasurable importance that young mothers be guarded against exposing themselves to any of the exciting causes of miscarriage at these periods, because when it occurs once it is almost certain to be repeated. The influence of habit, so constant and powerful in the human race, is nowhere so remarkable as in the action of the womb. One mother that I attended for twelve years, having aborted previously, never could get over the third month, although great care was taken by her on several occasions.

Sympathy has also a decided influence on the action of the womb, and consequently a woman when pregnant should not be allowed to witness an abortion nor an accouchement.

The symptoms of an approaching miscarriage are pain of back, sense of weight in the bony pelvis, extending to the thighs ; fulness of the bosoms, accompanied, perhaps, with heat and pain in these glands, and cessation of the "morning sickness."

Treatment.—In the first months of pregnancy the great object is to brace the constitution and improve the general health by daily exercise in the open air, light and moderate food, constant attention to the state of the bowels, and frequent use of the shower bath. The healthy peasant, who is never tempted by luxuries, seldom aborts ; while, on the contrary, the daughters of fortune, who are enticed by the rules of fashionable life to eat highly seasoned, indigestible food, drink alcoholic stimulants, and attend theatres, concerts, balls, and late parties, in crowded rooms, too often irritate the womb, and pay this forfeit.

It is necessary also to remind the fair sex that unless proper precautions are used to prevent the tendency towards abortion, it is impossible to guarantee their safety ; because in many instances time is not given for the appliances of art to be made available ; and contractions of the womb having once set in, the fœtus may be expelled with as little pain as is sometimes felt at a monthly period, and before a doctor can be called.

The reverse of this is, however, the general rule, and the pains experienced by some are very protracted and severe, the process being continued for days before it is terminated; but although the pains have been severe, and the hæmorrhage considerable, we are not to conclude that a miscarriage must occur, as after both of these symptoms many women have gone on to the full period, and produced a living baby.

The horizontal position, by equalising the circulation of the blood, and perfect rest and quietness, by composing the nervous system, have great influence in checking any inordinate action of the womb. When threatened with a miscarriage, the patient should therefore lie on a hair mattress, in an airy room, and be prevented from exerting herself even by talking. Visitors, and fussy, noisy attendants, do much mischief; and all gossiping must be prohibited.

The food should be entirely farinaceous, with milk, and not above a tepid heat; and the drink should be an infusion of cinnamon, moderately strong, or a teaspoonful of tincture of cinnamon in a cup of toast- or rice-water, taken cold; but tea, coffee, and alcoholic stimulants are injurious.

To allay pain is an important object, as it is the best means of preventing the loss of blood, and therefore an anodyne should be given immediately, and repeated every six or eight hours until pain abates. As opium disagrees with some females, and constipates the bowels, three grains of extract of hyoscyamus should be given in a pill, and repeated every four or six hours until pain subsides; but if this does not succeed, the extract of opium in the dose of one grain should be tried.

Cold applications externally are also powerful aids in preventing hæmorrhage; and flannels wrung out of cold water should be applied over the lower part of the bowels and to the privates, care being taken to change them as often as they get heated.

Should these means fail to control the hæmorrhage, the vagina or passage should be plugged with an old silk handkerchief moistened with sweet oil, pressed up, piecemeal, into the passage, so as to fill it perfectly; and if a round piece of ice be enclosed in the corner of the handkerchief, first introduced, the benefit will be considerably increased. This plug should be removed, and, if necessary, a fresh one introduced evening and morning, else the effluvia becomes distressing to the patient.

Such means should be continued as long as there is reasonable hope that the miscarriage can be prevented; but there is a stage in

the progress of abortion or miscarriage, when preventive measures cease to be useful, and ought to be abandoned. Nor are the symptoms which indicate this stage very distinct or well marked. On the contrary, few cases in midwifery require more experience or greater discernment, to enable the practitioner to discriminate with accuracy; because neither the amount of pain suffered, nor the quantity of hæmorrhage sustained in any given case, is sufficient to direct us in the course we should pursue.

It is certain that if the contractions of the womb have separated the placenta from its attachments, the fœtus must die; and, if retained after this, the infant remains as a foreign body or substance, and not a vital organization to be nourished by the womb.

The result of many cases has proved with equal certainty, that after this unhappy event, the pains may cease, and the womb may retain its contents to the full period of gestation; when a solid mass, containing the shrivelled embryo, is expelled without hæmorrhage, and the size of the birth in such cases varies from that of a large egg to the size of two fists, according to the development of the fœtus at the time of the threatened miscarriage.

Retention, in this manner, of the lifeless fœtus is not desirable, because it cannot fail to affect unfavourably the mother's health, and to doom her to a lengthened period of uncertainty, terminating in a disappointment; unless it so happens that she conceive again, and the blighted embryo be retained till after the birth of the full grown infant, which has occurred to many mothers.

Also when miscarriage takes place in the early months of pregnancy, after the fœtus has been expelled from the body of the womb, it may be retained in the narrow neck, keeping up slight hæmorrhage or wasting, protracting the sufferings of the patient, and entailing a tedious convalescence, the patient having lost too much red blood to enable the constitution to rally.

The above circumstances require us to cease to repel the natural efforts to expel, and to assist, by artificial means, in relieving the womb of its contents. And we are bound to do so, when we observe the following symptoms:—The neck of the womb distended beyond its natural dimensions, with its mouth dilated, so that we can touch the fœtus, or perhaps still contracted, although the neck is full and enlarged, and the bosoms, which were formerly tense and painful, now less sensitive, flaccid and flabby, accompanied with absence of the "morning sickness."

: These symptoms being present, cold applications should be dis-

continued, and a mustard plaster should be applied over the lower part of the bowels to stimulate the womb to more vigorous action.

Should this fail to produce the desired effect, an enema of turpentine and castor oil, half an ounce of each in a pint of thin warm gruel, should be thrown up into the bowel, retained as long as possible, and repeated, if necessary, every six hours for a day or two.

If hæmorrhage continues meanwhile, the vagina should be plugged, as formerly, with an old silk handkerchief, moistened with oil; for although the plug is an efficient means of preventing loss of blood, it does not hinder, but rather provokes, the action of the womb.

The ergot of rye is the next best remedy for stimulating the womb to throw off its contents. One drachm of the powdered ergot should be infused in a cup of boiling water, and one fourth of the fluid and powder taken every fifteen minutes, till pains become frequent and severe.

With this alteration of treatment, we should also alter the food, and allow a cup of black tea, with dry toast, and a lightly-boiled egg, if relished, for breakfast; beef tea or chicken broth, with boiled rice or stale bread for dinner, and arrowroot or Maizena boiled in water, and eaten with milk in the evening. As drink, toast or rice water, or imperial, moderately warm, is the most serviceable; but alcoholic stimulants should be avoided; and, if faintness prevails, twelve drops of fluid ammonia, or thirty drops of sal volatile, should be given, in a wine glass of toast-water, every hour or two hours, until the patient rallies.

After the fœtus has been expelled, in some cases the placenta or "after-burden" is retained, or, if it has passed off, a portion of the membrane may remain, keeping up irritation of the womb, and continual slight hæmorrhage.

The removal of either of these is attended with considerable difficulty; because, before the sixth month of gestation, the womb is not sufficiently developed to allow the hand to be introduced, as is customary at the full period, nor can two fingers be introduced with safety. To meet this difficulty, I have found a small scoop, such as is used for the removal of gritty portions after the operation for stone in the bladder; or a long, silver probe for gunshot wounds, if bent so as to hook at the point, an efficient aid. Either of these dipped into cold water, and introduced into the womb, stimulates it to increased action; and, by a little gentle manipulation, we soon succeed in emptying the womb of its contents, and saving the patient from a great deal of suffering, while the hæmorrhage ceases as soon as the cause of irritation is removed.

If the mouth of the womb be allowed to close on the placenta and membranes, although pain and hæmorrhage may cease, still the consequences to the patient are always serious, entailing generally a feeling of discomfort, depression of spirits, and impaired health, for months.

When the placenta and membranes are expelled from the womb, and detained only by the contraction of the neck, the operation is more simple, and they are easily removed by a narrow spatula, or small scoop, or the bent probe, insinuated into the mouth of the womb, and assisted by a finger of the left hand introduced into the vagina. Still the operator must not calculate on succeeding at the first touch, nor desist if discouraged by a little tenacity; but persevere with steady and gentle efforts until the object is gained.

The treatment of females after a miscarriage is also important, as the consequences are often serious in their effects on the health of the patient. Some fancy that when a miscarriage or abortion is got over, all danger is past; but this is a false calculation, as the injury to the constitution is generally double and often tenfold greater than that of an accouchement at the full period of gestation; because all interruptions to the progress of natural laws give a shock to the system, which is often followed by painful results.

Attacks of hæmorrhage are apt to recur about the first, second, or fourth week after a miscarriage, which, by reducing the strength of the patient, and increasing the irritability of the womb, do much to retard convalescence, and prolong the sufferings of the patient. To prevent these attacks, the patient ought to live on light, solid food, avoiding broths, soup, and slops of every kind, as any fluid taken into the stomach is immediately absorbed in part, and, by filling the blood vessels too hastily, must induce hæmorrhage.

The secretion of breastmilk, even before the sixth month, is often very troublesome after a miscarriage, and so abundant as to require the use of nipple glasses to prevent the dress from being constantly wet. This is also best restrained by the use of solid food only, and limiting the drink to a small quantity of imperial, made with cream-of-tartar, sugar, juice of orange and water, while the bowels are acted on by a teaspoonful of Epsom salts in a cup of ginger tea every morning. The bosoms should also be rubbed thrice a day with equal parts of hartshorn and oil, to stimulate the absorbents, and make the bosoms contract.

For bracing the system and improving the tone of the constitution, the shower bath is highly commendable. It should be tepid

at first, and cooled down gradually, and, when used cold for some time, may be succeeded by sea bathing, if seasonable, and if not, by a plunge bath, with a quantity of salt in it to make it stimulating. And to these means there should be added exercise daily in the open air, on horseback if liked, or by short walks or long drives.

PARTURITION.

After a period of nine calendar months, or forty weeks, labour commences with most women; but there is some difference of opinion as to the date from which we should reckon these forty weeks, some taking it from the cessation of the last menstrual secretion, and some preferring a fortnight after that, or a middle period between the last and the one that should have succeeded it.

My experience inclines me to the latter date; but we know that children born at the seventh month are capable of a separate existence, and that many births take place at the eighth month; while I have had convincing evidence that some mothers have gone on until the tenth month.

As civilised society has wisely established the rule that educated medical practitioners should attend mothers in their hour of trial, any observations on this subject would be unnecessary, were we not aware that in many parts of the wilds of Australia, unfortunate women cannot have a doctor, and are often obliged to be assisted by their husbands, or some neighbouring woman, perfectly ignorant of the proper management of such a case. We know also that some women, from a feeling of false delicacy, do not wish to have a doctor, preferring rather to entrust their own safety, and that of their offspring, to midwives, who are too often incapable of rendering the necessary service.

It is true that labour is a natural process, and that the action of the womb is generally sufficient to accomplish the end; but we know that in the lower animals the process is much less complicated than it is in the human race, and still many of the brute creation die in the effort to produce.

It is customary, also, to point to the aborigines of Australia, and other savage tribes, as evidence that accoucheurs are unnecessary, because these savages retire and bear their pains in solitude, and without assistance: but who will presume to say that the Almighty, in his abounding mercy, has not provided for them? Or what reflecting, intelligent mind, can consider that women, trained and

living in a state perfectly artificial, should be compared to the wild inhabitants of the desert, whose ills are never chronicled, and whose sufferings are untold ?

Although the efforts of nature are generally sufficient, yet it is very certain that difficulties do occur, which require the aid of art to obviate or remove them ; nor is there any operation in surgery more calculated to test an educated touch, delicate manipulation, judicious discrimination, and energy, guided and controlled by necessary patience, than is a really difficult midwifery case.

But labours that are perfectly natural require also assistance ; and for the benefit of those who cannot have medical attendance, we shall mention a few particulars to be attended to.

Every pregnant woman should provide a proper bandage to support the relaxed muscles of the abdomen after the birth of the infant. We place this first in the list of requisites, because it is very important, and so frequently neglected, that a folded towel, or something equally unsuitable, is too often obliged to be substituted for it.

This bandage should be made of jean or double calico, long enough to fold around the lower part of the bowels, and ten or twelve inches broad, according to the size of the patient. It should be fastened by three buckles on one side, and three straps of boot tape on the opposite side, placed sufficiently back from each edge to allow the bandage to be tightened, so as to give comfortable support to the womb and bowels. It should be placed low down, around the haunch bones and lower part of the bowels, and not around the waist, to press upon and injure the stomach.

To keep this bandage in its proper place, two straps of boot tape, lined with silk, should be attached to the lower edge of the bandage behind, about three inches from the centre on each side, to be brought under each thigh, and fastened by two buckles, placed on the lower edge of the bandage in front. And two such bandages, to allow for change, should be kept in readiness for the event, and worn for one month after each accouchement.

Mothers who have not this necessary support, especially after the first confinement, get the bowels so distended with flatulence and fatty deposition, that they are disfigured for life, the abdomen being unnaturally enlarged and pendulous ; while those who wear a proper bandage for four weeks, may bear a large family, and retain their figure nearly unaltered. Nor is this the only advantage derived from a suitable bandage, as by being kept tight below, over the

haunches, and easy towards the stomach, it presses the bowels upwards, and takes their weight off the womb, by which this organ is too often depressed, causing all the suffering we recorded in the article on prolapsus.

The patient's bed should also be prepared, and a hair mattress is preferable to any other kind; on this, the usual blanket and sheet being placed, there should be added a piece of oiled cloth, a blanket folded into four plies, and a sheet doubled similarly, about the centre of the bed, and near the front, to absorb the moisture. Care should be taken that there is a slight declivity from the shoulders downwards, lest, in case of hæmorrhage, the fluid flowing towards the head should make the woman uncomfortable.

When called suddenly to cases of accouchement, it is often painful to witness the carelessness of some midwives, who, neglecting the necessary preparation, leave the patient wet up to the shoulders, and lying on a feather bed, soaked through; so that there is only a choice of evils, either to allow her to remain in this dangerous state, or to have her removed to another bed, at the risk of causing or renewing fatal hæmorrhage.

The mother's dress should be suitable: a chemise with open sleeves, so that it can be drawn down over the feet, without disturbing the patient after her accouchement, a short night-dress, easily removed, and a flannel petticoat.

As labour is accomplished by the womb contracting to expel its contents, each contraction being accompanied with considerable pain, preparatory efforts are generally made about a fortnight or perhaps a month before the accouchement; and these are termed "premonitory pains." These do not always occur, and, in some cases, the only symptoms of approaching labour are a falling down of the abdominal tumour, a discharge of mucous from the vagina, and a protrusion of the external parts, together with fulness of the bosoms.

These signs are indicative of the approaching event, but they give us no certainty of the time at which it may occur.

At this period foolish and ignorant persons advise pregnant women to eat rich food, and drink ale, porter and wine, to strengthen them for their sufferings. Such advice is highly reprehensible, and when followed is certain to inflict severe punishment, by overheating the constitution, and exposing the mother to inflammation of the womb, increased milk fever, or suppuration of the bosoms, after her accouchement; together with hæmorrhage at the time.

Mothers who wish to have a "good time," safe delivery, and

speedy recovery, should limit themselves, during pregnancy, to light food, easily digested, and abstain from all alcoholic drinks. They should not remain too much within doors, but take as much exercise as possible in the open air daily ; taking care to obviate costiveness, especially in the latter months, by two grains of aloes and ten grains of salts, taken in syrup or in pills at night ; and, if it does not act, to be followed next day by a teaspoonful of Epsom salts, in a cup of ginger tea, occasionally.

A labour may be natural, difficult, or complicated.

NATURAL LABOUR.

A labour is considered natural when the head of the child presents, and when it is terminated within twenty-four hours without the aid of art. But in many cases labour is accomplished in much less time, perhaps in one hour.

In the first stage of labour we have the preparatory pains, recurring at regular intervals of ten or fifteen minutes, and accompanied with a slight discharge of blood called the "shows," indicating that the mouth of the womb is being opened and prepared for the birth. These pains are always very severe, being familiarly called the "grinding pains;" and they are likewise depressing to the spirits, causing mothers to fancy they must surely die.

During this stage there is no necessity for confining the patient to her bed ; she can sit up or walk about as she prefers it, and be encouraged to bear these pains patiently, as being absolutely necessary for her delivery. It is very wrong, however, to advise her, during this stage, to bear down or make any effort. By doing so now she only wastes the strength which should be reserved for completing the labour, and weakens herself for no good purpose. As soon as bearing down can be serviceable nature will direct her to do so ; and any effort before that is pernicious. The only means calculated to facilitate the labour at this stage is a large enema (three pints of soap and warm water) thrown up into the bowel by a syringe, so as to relieve the bowels.

At the second stage of labour, which is known by the intervals between the pains being shorter, and the mouth of the womb dilated, the patient should go to bed, and lie on the left side, with the knees well drawn up ; and a long towel should be tied to the bedpost, for her to hold by when bearing down. This is cooler and better than any person's hand, as the patient requires plenty of air,

and should be kept as cool as possible. On the contrary, we often see a sister, or some other kind friend, willing to share the pain if she could, hugging the sufferer, and thus depriving her of all that could aid her most—coolness, and plenty of fresh air to breathe.

At the second stage is the proper time to prepare a pair of good scissors, and cord to tie the navel string of the infant; half a dozen threads of strong silk or cotton, twisted together in two pieces, about a foot long each, and knotted at the ends.

Much interference in natural labour is injurious; but it is necessary to ascertain occasionally, by touch, how the case is proceeding; and it is comforting to the patient to be told that all appearances are favourable, and progress being made; but the most experienced practitioner should never venture to assert that the labour must be completed within a given time. Delays that could not be anticipated often occur; and any disappointment is very disheartening to the mother, destroys her confidence in her attendant, and might prove fatal.

If it be a first birth, the patient should be prepared for the breaking of the membranes and the escape of the waters, which often come with a gush that may alarm her. Nor is it advisable, in first births, to rupture the membranes till they burst naturally, because, while the waters are retained, they act as a soft wedge to dilate the parts, and prepare for the birth. When the membranes break and the waters escape early, causing what is termed a “dry labour,” it is always more tedious and less favourable.

Pains, although severe, are not always efficient, owing to some peculiarity in the case, which it may be impossible for us to comprehend or ascertain; but such delays must be patiently waited upon; nor is it admissible to communicate to the patient our doubts, that may be groundless, nor our impressions, which may be false. It is equally unnecessary to tell a falsehood; but the patient can be told truly that every pain does good, and that all that is required on her part are patience and courage.

The great advantage of an assistant before the birth of the infant, in natural labours, is by giving support to the perineum, or space between the vagina and fundament, so as to prevent its being ruptured; which may take place when the head is being expelled, or afterwards, when the shoulder is passing out.

This is a melancholy accident, which, when it occurs, renders the woman unable to restrain the action of the bowels, and makes her very miserable. It is true a surgical operation can unite the parts

again, and accomplish a cure ; but it is a difficult and severe operation, the necessity for which should be carefully guarded against.

To prevent this unhappy accident, the attendant, midwife, or other, should take an old silk handkerchief or soft towel in the left hand, and with the thumb and forefinger extended under the perineum, the palm of the hand being towards the child's head, gentle support ought to be given, so as to prevent the pressure of the head coming too suddenly upon this part. The patient should also be cautioned not to force or press down now, but to allow the head to be born slowly.

After the birth of the head there is a short respite from pain, when the attendant should ascertain lest the cord be around the child's neck, and, if so, it should be eased by pulling one end down a little ; but, as soon as pains return, support should again be given to the perineum, until the shoulders are born.

Unless the chord be tight around the child's neck, the expulsion of the child's body should not be hastened, because, while it remains in the passage, it excites the womb to contract more perfectly, and throw off the placenta or after-burden.

To encourage this, and make the womb contract also, after the placenta is removed, the assistant should place the left hand over the lower part of the bowels, and extending the fingers and thumb fully, keep up a grasping movement over the womb, until it is found to tilt upwards against the hand, like a large ball. When it is firmly contracted in this way, no hæmorrhage or flooding can take place ; but while the womb remains relaxed, the mouths of the bloodvessels that supplied the infant formerly, and that were torn across by the separation of the after-burden, are quite open, and must continue to pour out the life's blood until contraction is established.

If the cord be around the child's neck, perhaps twofold, so that it cannot be eased to allow the infant to breathe, then the delivery must be hastened, and friction, as described, made over the womb, to stimulate it to contract. And when this is attended to early, in proper time, my experience convinces me that it has the desired effect ; while many mothers have suffered excessive hæmorrhage, or sunk, from want of proper attention to the state of the womb.

The first impression of the external air upon the infant makes it cry loudly, unless part of the membranes remain across its face, or that mucus obstructs its nostrils and mouth. The former is easily removed, and the latter is best got rid of by placing the child's chest

across the left arm, and with the right hand removing the mucus from the mouth and nose as it flows while the face hangs down. The cry of the child, which too often attracts all attention to it, while the state of the womb and the mother's safety are neglected, gives perfect evidence that it is well, and that there is no necessity for hastening the birth, nor for cutting the cord and separating the infant.

If the child has, however, been long detained in the passage, or strangled by the cord around its neck, it may be stillborn, its face being black and swollen. If it be so, the infant's head should be raised, while it is held in the sitting posture; and if it does not soon begin to breathe, the cord may be cut about two inches from the navel, and a little blood be allowed to flow from it, so as to relieve the congestion of the brain.

If the circulation has ceased, blood may not flow from the cord when it is cut; then it should be firmly tied half an inch from the end, and the baby should be placed in a bath of 98° Fahr. And, when in the bath, artificial respiration should be made by holding the child's nostrils, and alternately blowing into its mouth and gently pressing the chest to expel the air, until resuscitation takes place, which is always heralded by a deep sob.

The infant should then be removed from the bath, dried, and folded in hot flannels, until it becomes strong enough to bear the fatigue of washing and dressing. But such difficulty seldom happens in natural labours, and all that is generally necessary is to separate the child, by tying the cord two inches from the child's body, and again to place another ligature about an inch from that, towards the placenta, and cut the cord in the centre between these two ligatures. The first ligature is necessary to prevent the infant from bleeding to death; and the second is required to prevent the mother from losing blood through the placenta, the unavoidable loss being generally enough for the constitution to bear.

The blood-vessels which form the cord are frequently interlaid with a quantity of gelatinous matter, which, by oozing out after the cord is tied, makes the ligature get too slack, so that children, after being dressed, have bled to death before they were noticed. To prevent this catastrophe when tying the cord, it should be compressed by the ligature drawn slowly, gradually and firmly, until the blood-vessels are sufficiently secured; but the blood-vessels must not be cut by the ligature, and this is the object in making it of six threads, that it may not cut.

The baby having been removed, the midwife or assistant should place the left hand on the lower part of the mother's bowels, as directed above; and as soon as the womb is felt to contract, the chord should be pulled gently with the right hand, while the mother is encouraged to bear down, to assist the expulsion of the placenta, or after-burden; and when it appears at the external parts, it should be taken with two hands, and twisted round, twice or thrice, so as to bring all the membranes with it. For, if any part of the membranes be retained till decomposition sets in, the effluvia is distressing to the patient.

Much force should not be used in pulling the cord, because it might break, or if the placenta be not entirely separated, the womb might be dragged down and inverted. If the placenta does not come readily, the better plan is to introduce the hand into the vagina, and if the after-burden is lodged there, as generally happens, it is easily removed; and if it be still in the womb, the presence of the hand causes the womb to contract, and expel it.

Most writers on midwifery direct us to wait half an hour, before making any attempt to remove the placenta; but if proper attention be paid to the contraction of the womb, there will be no necessity for this delay, and the patient will be spared the suspense.

The wet things should next be removed from about the patient, and replaced with dry articles, and this should be effected with as little fuss and excitement as possible. The patient should not be raised up, lest faintness or flooding be induced. All the damp articles should be pulled down, by having the sleeves open, or else by cutting them; and when replaced the sleeves should be open to prevent the patient being much disturbed. And to absorb the moisture from the oozing that necessarily follows the birth, a soft napkin, folded four double, should be applied to the external parts, and renewed as often as may be necessary, for the patient's comfort.

The bandage should now be applied round the lower part of the bowels, care being taken to have it comfortably tight below, and easy above, and also to ascertain that the womb is firmly contracted, before the bandage is fastened. The straps under each thigh should be adjusted to prevent the bandage from shifting up from its proper place; and this being done, the patient can be assisted to move gently into the middle of the bed; but, as we mentioned before, it is more convenient and desirable that, during labour, the patient should lie near the edge of the bed.

TREATMENT AFTER DELIVERY.

Much depends upon this, as it is too well known that many safe deliveries have been followed by bad recoveries. The familiar conclusion is that mothers who suffer least at their accouchement generally fare worst afterwards. This is not a natural consequence, but the opposite, and must be the result of mismanagement in some way.

Mothers who during pregnancy live too fully, eating rich food and drinking alcoholic stimulants, have their constitutions in such an inflammatory state, that the severe efforts necessary to produce their offspring, and the consequent shock to the nervous system, can scarcely fail to be followed by inflammation or fever.

The same bad effects may be produced by the use of stimulants at the time, or by unnecessary exposure to cold, or after the accouchement; as many are injured by being advised to take wine or other stimulants, and gross, heavy food, unsuitable for their present state. Well meaning, but ignorant, friends often advise such things, with the hope that they will strengthen the patient; but they invariably injure her.

A cup of black tea, moderately hot, is the best restorative after the fatigue of labour, and does all that is required. Some practitioners give an opiate, but this is often unnecessary, and is better dispensed with. Perfect rest and quietness do more than anything else to allay the irritation of the nervous system, and to restore the wasted energies of the patient. All visitors should therefore be excluded, all gossip proscribed, and the patient prevented from talking, except to communicate her wishes or tell her wants.

At the time the placenta, or after-burden, is removed, there must be some loss of blood; but if strict attention has been paid, and care taken to make the womb contract, as stated above, it is always moderate, and not injurious; sometimes so slight as scarcely to stain a napkin.

About two hours after the birth, when the patient is perhaps asleep or overheated, flooding or hæmorrhage is apt to occur, especially if the womb is not properly supported by a bandage. At this period the patient should be attended to, and examined if asleep, lest she be wasting too much. If it is so, she should be roused, but in such a way as not to alarm her or excite fear; and this is best accomplished by applying the baby to the bosom, which enlists her

attention and disarms suspicion; while the sympathy with the bosom diverts the flow of blood from the womb, and is often the best means of controlling the hæmorrhage.

In addition to this, the lower part of the bandage should be unbuckled, the hand placed over the womb, and a grasping movement kept up by the fingers and thumb, until the womb is found hard like a ball. When the womb contracts in this manner, a large quantity of clotted blood may be expelled, which sometimes alarms nurses; but this is very favourable, and gives assurance of the patient's safety. And the bandage being replaced, and the damp things removed, a fresh napkin should be applied; nor is it advisable to fatigue the mother by keeping the baby at the breast, which, as soon as the hæmorrhage ceases, should be returned to the nurse.

The food of women after their accouchement should be light and easily digested; chiefly farinaceous, as arrowroot, maizena or rice, boiled in water, or light gruel, if preferred, eaten with milk; and toast- or rice-water or rennet whey, is the best drink. But as some patients cannot digest milk, beef or mutton tea or chicken broth can be substituted for milk with these persons.

Solid animal food should not be taken till after the milk-fever is over, about the fifth day, and then in small quantity, once a day. Nor should large quantities of any kind of fluid be indulged in, because they all, water included, increase the flow of breast-milk, and thus punish both mother and child; as most mothers would suckle two babies better than one during the first six weeks. Too much slops increase also the milk fever by overfilling the blood-vessels, and consequently distending the bosoms.

An error is often committed by giving food and drink too warm to such patients, and thus keeping them overheated, and constantly perspiring; and also by keeping the chamber too close and hot. On the contrary, the patient's chamber should be well aired, and the amount of bed-covering just sufficient to make her comfortable; unless the milk-fever sets in with shivering, when an additional blanket, and hot water to the feet, should be applied for a few hours.

About six hours after the birth, the patient ought to be reminded of the necessity to micturate or pass water; because when this is neglected too long, the bladder being too much distended, may lose the power of contracting to expel the urine. A bed-pan should be used on such occasions, and if there is difficulty in passing water, a

flannel, wrung out of hot water, should be applied to the privates. If these means do not succeed after a trial of two hours, a doctor should be got to take the water off by a catheter; and the operation is so simple that it need not alarm any one. A small silver tube is introduced by the natural passage, and gives no pain, but instant relief. It must, however, be repeated every twelve hours, till the bladder regains its power of contracting.

During the last months of pregnancy, the enlarged womb, by pressing on the bowels, impedes their natural action, and, as a consequence, accumulations are apt to occur in the colon or large bowel, although aperient medicine may have been taken occasionally, with apparently good effect. As soon, therefore, as the mother has rallied, after the accouchement—say twelve hours—a mild aperient should be given. Castor oil is the usual dose; but some patients cannot be persuaded to take it, and two grains of socotrine aloes, and ten grains of salts, in syrup or pills, do equally well. This dose should be given every night or alternate night, till after the milk-fever; and afterwards as it may seem necessary.

The period at which breast-milk is secreted cannot be determined by any certain date, some mothers having it oozing out, or dropping from the bosoms before their accouchement, while others have none till the third day after the birth. The latter, in first births, forms the rule; still it is desirable to have the child applied early to the breast. The first milk acts on the child's bowels, and prevents the necessity of giving the absurd dose of sugar and butter, so often thrust down the child's throat, to the certain injury of its delicate stomach. If an aperient be necessary, a teaspoonful of castor oil is preferable, but this too irritates the stomach, and can generally be dispensed with.

The child should be put to the bosom as soon as the mother has rallied, say twelve hours after the birth, because, although there is no appearance of milk, the infant will get the colostrum or first secretion of the bosom, which acts upon the bowels, and carries off the meconium. And an additional advantage is gained by the child drawing the nipple out, and preventing it from sinking down, as sometimes happens.

We are aware, however, that the hope of getting the nipples drawn out by the infant often disappoints, because instinct tells it that its efforts are unprofitable, and it soon ceases to persevere; but to allow the bosoms to become gorged with milk before the baby is applied is highly reprehensible, being calculated to inflict

upon the mother severe milk abscess, and upon the infant the loss of its proper nourishment.

Until milk is secreted the infant requires a little fluid to moisten its throat, and dilute the gastric juice. For this purpose a tea-spoonful of toast-water made palatable with a little sugar, is quite sufficient; but the sago, arrowroot, panado, and gruel sometimes given are highly objectionable; nor need nurse nor mother be anxious lest the infant should starve meanwhile, as the thymus gland in the chest, which must be absorbed to allow the child to breathe freely, affords sufficient nourishment, and thus performs a double service.

It is necessary to guard nurses and mothers against the officious and dangerous liberality of kind visitors, who, if suckling, will, even unasked, give their breast to the young infant. I have known an infant so treated refuse its mother's breast ever after, leaving the two neighbours no alternative but to exchange babies during the period of suckling; while the infant was deprived of the first milk, so salutary to its constitution, and the young mother was almost broken-hearted because she was rejected by her offspring, and deprived of the pleasure of suckling it.

No one could intentionally sever such a natural bond of union. On the contrary, every hallowed impulse would lead us to encourage every mother to suckle her own offspring, unless some organic or constitutional imperfection may prevent her doing so.

The pleasures of society and the trouble of nursing should not be allowed to influence any mother, because they are greatly over-balanced by the better health and greater happiness which accrue from this delightful office.

Some intelligent patients have told me that they never felt so happy as when suckling their baby; and that after each repetition of the pleasing duty, they seemed to have accomplished something worth living for. Nor was the impression unnatural, nor the conclusion unreasonable. It was well founded and just.

All admit that the artist who can represent on canvas, or the statuary who can form from the block of marble a living likeness of his fellow-man, has achieved a work of which any mortal may be proud. And with what greater reason may not the mother exult, who rears an intelligent human being, endowed with an immortal soul—a daughter, who may be an ornament to society; or a son, who, as a senator, may be the guide of a nation, or as a soldier, the guardian or protector of his country?

AFTER-PAINS.

These are often an effort of nature to expel some clot of blood, or portion of the membranes, that may have remained in the womb; and where proper care has been taken to make the womb contract perfectly, as directed above, after-pains are seldom troublesome.

Still, we do find them severe in some instances where no clots nor portions of membrane have appeared that could account for their persistency, nervous irritability of the womb being the only assignable cause for such spasmodic action. They seldom follow first births, and they are always more troublesome than dangerous. They are easily distinguished from inflammation of the womb by their intermissions, and by their commencing soon after the birth.

If they be severe, so as to deprive the patient of sleep, six grains of Dover's powder should be given in a little syrup at night, and this should be followed in the morning by two tablespoonfuls of castor oil to act on the bowels. But some cannot bear opium in any form, and these should get ten grains of camphor, powdered by dropping a little brandy on it, and then putting it into syrup or treacle; and this dose may be repeated in two hours if necessary. With the first dose of camphor it is well to combine two grains of aloes and ten grains of salts, to be followed next morning with a teaspoonful of Epsom salts in a cup of ginger-tea; as after-pains, when they commence, seldom cease till the bowels have been freely acted on.

MILK-FEVER.

This is never troublesome, unless the constitution has been in an inflammatory state before the accouchement, or rendered so afterwards by bad management. It is generally announced by a slight rigour or increased chilliness, which should be controlled by a cup of warm toast- or rice-water, and an additional blanket, with hot water to the feet. And if the bosoms be painful, six grains of Dover's powder should be given in a little syrup, and the breasts should be rubbed with a teaspoonful of hartshorn and oil, night and morning, till the fever subsides, while the bowels are acted on by a dessertspoonful of Epsom salts, in a cup of ginger-tea, every morning.

The familiar dose of mulled wine, brandy and hot water, or whiskey-punch, as the common cure for the shivering fit, is very objectionable, and cannot fail to increase the fever, which, if pam-

pered by stimulants, may be made unnecessarily severe and persistent.

The fever indicates that the bosoms are being distended, and that the infant should be applied to relieve them ; but it is difficult in some cases to extract milk from the ducts, and a young infant may not succeed at first, a grown child or person being required to draw the nipple out, and cause the milk to flow.

Many mothers secrete much more breast-milk than the infant can digest, and when this is noticed a portion, perhaps half, should be wasted or given to another child, because it is very injurious to an infant to be gorged with too much ; and flatulence, colicky pains, and unhealthy stools, accompanied with wasting, must be the consequence.

THE LOCHIAL DISCHARGE.

Oozing from the womb after the birth must necessarily follow to some extent, owing to the number of bloodvessels torn across by the removal of the placenta, or after-burden. This discharge is, however, not only natural, but we have reason to believe that it is salutary, and serves as a safety valve to the constitution, which might otherwise suffer from the sudden cessation of the flow of blood to the womb.

Its absence, especially during the first three days after the accouchement, is always considered ominous of evil, and is generally the precursor of fever or inflammation. We meet, however, with some exceptions to this rule, the counter-current to the bosoms for the secretion of breast-milk, relieving the circulation by diverting it to another point.

It is certain also that the quantity of the lochial discharge must be influenced very much by the amount of contraction of the womb after the birth ; and when this has been properly attended to, and perfect, the oozing is generally slight. And to this cause we must attribute the variety we find in the continuance of this discharge, which in some cases terminates in less than a week, while in others it may be prolonged to the end of four weeks. Some of my patients had no discharge after the third day ; but with these the secretion of milk was very abundant.

In addition to the ichorous discharge from the bloodvessels, there may be also slight purulent discharge from the surface of the womb, left raw by the separation of the membranes ; and if any portion of these, or of the placenta, is retained in the womb, decomposition must take place, and the fetor of the discharge is distressing to the

patient. To correct this, a little of Condyl's disinfecting fluid, properly diluted, should be sprinkled on each napkin, and the strictest attention paid to cleanliness.

Some nurses and ignorant persons imagine that, to facilitate the escape of these discharges, the patient should sit up at an early period; and for this purpose I have found patients sitting up on the second day after their accouchement. This is not only perfectly unnecessary, but also very reprehensible, and calculated to inflict a permanent evil, as described in the article on prolapsus.

Sitting up to take food, to suckle the baby, and to attend to the calls of the bowels and the bladder, is quite as much as can be borne with safety, and any lengthened stay in that position should be carefully avoided; because the womb, lately enlarged to accommodate the growth and bulk of the baby, is now as many pounds in weight as it was ounces formerly; and if this increased weight be thrown on the soft parts, dilated and weakened by the birth, the result must be the most lamentable that mothers are exposed to—falling down of the womb.

Four weeks are required to allow the womb to return to its original size and weight, and in some cases six weeks are necessary to enable the ligaments to recover their proper tone. Mothers who wish to enjoy perfect health should, therefore, keep the horizontal position for four weeks. All my patients who did so on one occasion, required no persuasion to induce them to do so afterwards. They suckled with so much more ease, and were so active and comfortable, that they felt the advantage, and were glad to avail themselves of it.

Nor is it necessary to confine the patient to bed, nor to the same room. Change of air is desirable, and after the second week, the patient, being laid on a sofa, can be removed to any adjoining room, if not too cold; the position, and not the place, being the object.

The ninth day after the accouchement is justly considered critical, as some of the worst recoveries have progressed favourably up to that time; but if on the tenth day there is no threatening of fever nor inflammation, there is reason to consider the patient convalescent, and her food should be a little more generous, as a little roast pullet, grilled chop, or beefsteak, with stale bread, for dinner, to prepare and strengthen those who will act on their own responsibility, and get up on the fourteenth day. After forty years' experience, I conscientiously advise rest for two weeks longer; but no mother should sit up before the second week, at soonest.

EXCORIATED NIPPLES.

Mothers frequently suffer very much from this severe affliction, which is caused by mismanagement of the constitution during pregnancy, or after the accouchement. Those who limit themselves to plain, nourishing food, easily digested, abstain from alcoholic stimulants, and pay proper attention to the state of their bowels, both before and after their confinement, are rarely, if ever, punished with sore nipples. And when these occur, the blood must be in a diseased state, to alter which is the most certain way to improve the excoriation of the nipples.

Treatment.—The food should be very mild, principally farinaceous, and all alcoholic stimulants must be abstained from; while the bowels are moderated by two grains of aloes and ten grains of salts, taken in a little syrup, or in pills, at night; or, if preferred, half a teaspoonful of Gregory's mixture, when required.

To alter the state of the blood in such cases, I have found the chlorate of potash—twenty grains in a wineglassful of water, after food, thrice a day,—very efficient. And when the appetite is deficient, a wineglassful of infusion of chiretta or quassia, after dinner, is also useful.

As a local application, a rag moistened with a saturated solution of borax, and changed often, does good service, and, being sweet, does not offend nor injure the baby. Some prefer a plaster of equal parts of beeswax and fresh lard, rendered together.

In addition to these means, it is absolutely necessary to protect the sore from the child's gums by a nipple shield; and the prepared teat, or the gum elastic, carefully fitted so that the child can suck through it, does very well. In the absence of these, a round piece of dried bladder, with a small hole punched out of the centre, to expose the point of the nipple, when moistened with tepid water, is useful.

The removal of the milk from the bosoms cannot be dispensed with; and if this be not constantly attended to, the irritation will be kept up, and more injury produced. Adults who can suck, can empty the breasts with more ease to the mother, and are often more serviceable than a baby.

SUPPURATION OF THE BREAST, OR MILK ABSCESS.

This is always produced by one of two causes—accumulation of milk, or inflammation by exposure to cold.

The nipples are in some cases so flat that the infant cannot catch them so as to be able to suck. This may be caused by deficient development of the nipple, or by a tumour in the bosom being entangled in the milk ducts leading to the nipple, and by its weight dragging the nipple within the bosom. Under such circumstances, all efforts to remove the milk are unavailing, and a milk abscess is the consequence. And when this occurs, the whole bosom may be involved and converted into a suppurating mass.

If suppuration of the bosom supervene from exposure to chill from cold, the inflammation is confined to one part of the bosom, and a tumour forms at one or more points, distinguished at first by being hard and unyielding, and afterwards painful when touched. The skin over these parts soon becomes red, and thinning gradually by the pressure of the tumour underneath, finally bursts.

Treatment.—The attendant on every first accouchement should ascertain early the state of the nipples, and if they are found to be so depressed that an infant cannot suck them, milk should not be allowed to come into the bosoms. This can be safely and effectually prevented by strapping the bosoms with adhesive plaster the next day after the birth. The plaster should commence two inches above the bosom, and be continued one inch below it, care being taken not to double the nipple upon itself, but to press it down into the bosom.

In the absence of adhesive plaster, or any person to apply it properly, the same object may be obtained by a bandage of calico put over the bosoms and around the chest, tight enough to give firm support to the bosoms, and prevent milk coming into them, but not to impede the breathing. If a calico bandage be adopted, straps should be attached to it over the shoulders to prevent it from shifting.

Together with this support for the bosoms, the patient's diet should be limited, and very little drink should be taken by her; while the bowels are kept acting by a dessertspoonful of Epsom salts in a cup of ginger-tea, taken every morning.

But in advanced cases, where suppuration has taken place, and milk abscess has formed in the bosom, it should be encouraged to come to the surface by poulticing with bread-and-water or linseed meal, and when the abscess bursts the matter should be well pressed out, and the bosom strapped with adhesive plaster, to be renewed every day, so as to remove any fresh matter, and press the sides of the cavity that contained the matter together, to make them unite:

or a bandage may be applied for the same purpose. If this be not attended to, the abscess will fill again, and waste the patient's constitution by the continued formation of pus.

When suppuration of the bosom threatens mothers who have been exposed to cold during the period of suckling, it should be differently treated. When the hard tumour in the bosom is first noticed, the patient should get a warm bath, at 100° Fahr., for half an hour, then go to bed, have an additional blanket, and six grains of Dover's powder, to be repeated in three hours, to cause perspiration, which should be encouraged by drinking a cup of hot toast-water, and kept up for twelve hours, when everything that is moist should be removed, and replaced with well-aired articles. The bowels should then be acted on by a tablespoonful of castor oil, and an equal quantity of turpentine combined; to be followed by a dessertspoonful of Epsom salts, in a cup of ginger-tea, every morning, until the tumour is dispersed.

As a local application, the tumour should be rubbed with hartshorn every three hours after the patient leaves the bath; oil with the hartshorn is unnecessary, and lessens the effect. If hartshorn is not convenient, oil of turpentine used every six hours may be substituted, but it must not be applied so freely as to blister.

The food should be limited to tea and dry toast morning and evening, and rice boiled in water and eaten with milk for dinner, while all stimulants are abstained from. Very little drink should be taken, and that toast-water; and if the tumour be attended to early before pus has formed, these means seldom fail to disperse it, and save the patient incalculable suffering.

If the inflammation has been neglected in proper time, and the tumour has softened and suppurated, then the matter should be encouraged to come to the surface by poulticing with bread and water or linseed meal; and when the abscess bursts, the matter should be well pressed out, and the milk being thoroughly removed from that breast, the entire bosom should be strapped with adhesive plaster, or bandaged, as above, only a small hole being left for the escape of any fresh matter, and the milk prevented from coming to that breast until it is perfectly healed. Some may object to this treatment as being calculated to rob the baby of its nourishment; but it is equally beneficial to the baby as to the mother, because the milk being kept out of the diseased breast, an additional quantity flows to the other bosom to feed the infant with more healthy nourishment.

When, on the contrary, a suppurating bosom is left without support, matter burrows in the porous substance of the breast, and one abscess forms after another, till the greater part of the bosom is converted into cells like a honey-comb. During this process the mother's health and strength are frittered away by this wasting discharge; the milk ducts are destroyed; sinuses form, which cannot be got to heal without the severe operation of cutting them open; the unfortunate patient is kept suffering for months; and her bosom is rendered useless for life.

Experience convinces me that by strapping the bosom with adhesive plaster after the first abscess, others will be prevented; and that even in the worst cases, where sinuses have formed, it is the most efficient plan of treatment; because when the bosom is allowed to hang without support, after the matter escapes from an abscess, the walls of this cavity being separate from each other, can be filled up only by the slow process of granulations, which may take months to accomplish; but when the bosom is properly supported by adhesive plaster or bandages, the walls of the abscess, or sinuses, are brought into contact, and soon unite, forming a speedy, safe, and radical cure.

Scrofulous tumours of the bosom form an exception to this rule of treatment; and a lymphatic gland beneath the bosom may enlarge and suppurate with so little pain that it is not noticed until matter has formed in considerable quantity, the gland of the bosom being little implicated, and the milk ducts uninjured. In such a case poulticing is of little service, because the matter is too deep-seated; nor should we wait for it to come to the surface. But as soon as fluctuation convinces us that the gland has suppurated, an opening should be made with an abscess lancet to allow the matter to escape, and a tent should be kept in the wound till it heals from the bottom.

DIFFICULT LABOURS.

Although the presentation is natural, and the head coming first, still the labour may not be terminated within twenty-four hours by reason of its being delayed in the bony pelvis, the size of the infant's head being too large for the passage.

Such cases require the aid of art, and should be delivered by forceps, which, like little hands, being passed up on either side of the child's head, seize it and bring it forth. These instruments, like many other good things, have been abused, being substituted for the neces-

sary patience, in cases which did not require them ; but a still greater error may be committed by postponing their application too long.

They are perfectly safe in proper hands ; but no person who is ignorant of the anatomy of the parts involved should attempt to use them.

When the head of the infant is in the bony pelvis, it is felt pressing on the perineum, or space between the private and the fundament ; and the general rule is that it should not be allowed to remain in that position longer than twelve hours, without the delivery being assisted by forceps ; and even this period may be too long if the pains are severe, or the bladder distended with urine.

Violent labour pains, if continued too long, may cause the womb to be ruptured by its own efforts, from which melancholy accident I have seen only one recovery, but many fatal cases ; and the pressure of the child's head on the distended bladder may cause inflammation and sloughing of this organ, of which some unhappy instances came under my notice.

In 1836, when in charge of a dispensary in the North of Ireland, I was requested to visit a young woman, the mother of one child, which was stillborn. She had given birth to this infant about three years previously, and since that had not been able to retain her urine ; and on inquiry I learned that her labour had been difficult ; that it was prolonged for forty-eight hours, and that then she was delivered by forceps.

By aid of the speculum vaginæ I ascertained that the bladder had sloughed extensively, and had healed, leaving a large aperture just behind its neck, through which the urine passed immediately into the private, forming what is termed a vesical vaginal, or urinary fistula.

The aperture being large, and the destruction of parts extensive, there seemed little hope of a cure in her case ; but as she was very miserable, from the constant irritation of the urine, and anxious that I should try the effects of an operation, I made the edges of the cicatrix raw and united them with silver wire sutures.

The union was very favourable, and no urine escaped as long as a gum elastic catheter was kept in the bladder ; but when this was discontinued, and she began to walk about, inflammation set in, and the united edges separated, leaving the rent larger than before. This was caused no doubt by too much tension on the part when urine collected in the bladder, and by the scrofulous tendency of her constitution, which rendered any further attempt ineligible.

In 1841, shortly after I arrived in Sydney, New South Wales, I was called to attend a woman in her accouchement, her husband informing me that there was a midwife with her, and that instruments were required.

I found this patient in a very weak state, exhausted by what the midwife called "hard labour" for thirty hours, the head being in the bony pelvis the last twenty-four hours. I learned that the patient had given birth to a stillborn baby about two years previously; that a doctor was then in attendance, together with the same midwife; that forceps were not used; and that the birth was produced by natural efforts, at the expiration of three days and nights; but the unfortunate sufferer could never retain her urine from that period.

The despondent appearance of the patient, and the inefficacy of natural efforts, convinced me that artificial aid should be given; but lest I should be thought impatient, I requested a consultation with some other medical gentleman; and the husband brought the Hon. D. Macfarlane, who joining me in opinion, I delivered by forceps. Assistance came, however, too late, for the baby was stillborn; but the mother's recovery was very good. And when she was perfectly convalescent, I applied the speculum vaginæ, and found that inflammation and sloughing of the bladder had followed her first birth; and that the ulcer had healed, leaving a small round hole, about the size of a goosequill, in the side of the bladder.

There being little loss of substance in this case, and the edges of the aperture being indurated, to excite a new action seemed calculated to cause the opening to close; and for this purpose I touched the edges with a heated iron every third day at first, and afterwards at longer intervals, until the false passage filled up perfectly, and the woman could retain her urine.

This woman gave birth afterwards to three living children without artificial aid; and I mention these cases to show the impropriety of withholding artificial aid too long, and the danger of allowing the bladder to be distended with urine, while the child's head is in the bony pelvis. Nor should forceps ever be applied until the urine has been taken from the bladder, by introducing a catheter.

Under peculiar circumstances it may be necessary to break down the child's head, to effect a birth; but, in such cases, a second medical practitioner should, if possible, be obtained.

PRESENTATION OF THE FACE.

This is not very common; but, when it does occur, the labour must be more difficult and protracted; because the bones of the face being fixed, cannot overlap to favour the birth, as the open sutures allow the bones of the skull to do. This presentation requires, therefore, greater patience on the part of both mother and attendant, and must generally be assisted by the vectis or lever.

Although the life of the child in such cases is seldom in danger, still the mother should be told that the face presents, and that she may expect to see it swollen and discoloured by the pressure upon it; but that a few days will remove the discoloration, and restore the natural appearance of the features. This prevents any necessity for subterfuge and concealment, which are always injurious to the mother, and should never be adopted. Candour and honesty serve every patient most.

FOOT PRESENTATION.

When the feet present or come first, the birth is generally speedy, and equally safe for the mother, but not so much so for the child, which is apt to suffer from the circulation in the cord being obstructed by pressure during the birth of the head.

Footling cases should not be hastened in the early stage. On the contrary, the longer the buttocks or breech are detained in the bony pelvis, the dilatation of the soft parts will be increased, and the birth of the head the more easily effected.

To have the toes of the infant turned to the back of the mother, is the most favourable position for the birth of the head; and when the breech is expelled, if the toes are turned forwards, the assistant should seize the breech in both hands, and, during the next pain, endeavour to turn the face backwards. After the birth of the shoulders, this is especially necessary to facilitate the passage of the head.

When the breech is expelled, the assistant should examine the cord, and if the pulsation in it has ceased, the birth of the shoulders should be hastened by pulling the body steadily down. If circulation of blood is restored to the cord after the birth of the shoulders, there is no cause for anxiety for the safety of the child; but if the pulsation in the cord is still suspended, it is necessary to assist at every pain, and hasten the delivery of the head by pulling the shoulders down.

By this action the child's chin is apt to turn up, and increase the difficulty of the birth, which should be prevented by the assistant putting the forefinger of the left hand into the child's mouth, and thus depressing the chin. To effect this, much force is not required, and any violence might fracture or dislocate the under jaw. The weight of the finger retained in the mouth is sufficient, and it may render service by enabling the child to breathe.

The head being born, the assistant should examine the cord; and, if it pulsates, the child should not be separated for a few minutes, until it begins to cry; but if there is no circulation in the cord, as generally happens, ligatures should be applied, and the cord divided between them, as directed above, in natural labours.

The child's face should then be turned down, to favour the escape of mucus from its mouth and nostrils, which being perfectly freed, breathing should be provoked by sprinkling a little cold water forcibly on the child's face and chest. Should this not succeed, artificial breathing should be commenced, by holding the infant's nostrils, and alternately blowing into its mouth, and then pressing gently on the lower part of the chest and stomach to expel the air from the lungs, proper warmth being kept up meanwhile, by folding the child in flannel, near a fire. By persevering in this way, life has often been resuscitated long after hope had ceased to give encouragement to expect it.

All attention being engrossed by the baby in such cases, the mother is too often neglected, and the contraction of the womb not attended to. This is very reprehensible, and as the life and safety of the mother are of greater importance than the baby, the assistant should direct a nurse how to manage the infant until the mother is properly bandaged and made comfortable, and then the child should be attended to.

BREECH PRESENTATIONS.

When the buttocks present, the birth is always more tedious than in footling cases; because the infant being doubled at the haunches, requires a larger space to allow it to pass; but the danger to the child is lessened.

Much patience is necessary in the treatment of breech presentations, and it is an error to attempt to bring down the feet too soon; for although the delay may be irksome, the dilatation will be more perfect, and the delivery of the head facilitated.

If the bony pelvis is unusually narrow, and the suffering of the

patient extreme, it is sometimes necessary to assist by applying the blunt hook over the infant's thigh. By moderate traction with this instrument, the birth can be hastened considerably; but any undue force may fracture the child's thigh; but when the breech is born, the treatment is exactly similar to that of a footling case.

CROSS BIRTHS, OR HAND PRESENTATIONS.

In this presentation the child is lying across the bony pelvis, and cannot be born until its position is altered; and the possibility of such a presentation occurring, renders it absolutely necessary for the assistant, in every case, to ascertain the kind of presentation before the waters break; because, after they escape, any alteration must be made with much greater risk to the mother and her offspring, as also more difficulty to the operator.

Hence the necessity of having a doctor to attend on midwifery cases, and the folly of some mothers who, from a misguided delicacy of feeling, will not allow a doctor to see them in proper time. To me it is a painful reminiscence to reflect on the number of lives of both mothers and infants that I have seen lost in this way.

In instances not a few I have been called to find the arm born to the shoulder, swollen immoderately, and black as one's boot, the womb being ruptured by the violence of its own efforts, and two lives sacrificed on the altar of ignorance or false modesty.

To ascertain the presentation before the membranes break, requires an educated touch and considerable experience; and those who attempt to do so hastily are often mistaken; because a hand, when touched through the membranes, may be mistaken for a foot, unless care be taken to notice the absence of the heel. The face also may be taken for the breech, the depression of an eye or the fissure of the mouth simulating the fundament.

If the hand presents, the mother should be made aware of the occurrence, but in a gentle manner, so as not to alarm her. This is necessary to prepare her for submitting to the assistance that is requisite to save her and her infant. Meantime the bladder should be emptied, and a large enema of soap and water should be thrown up into the bowel to unload it.

The hand and arm of the operator should be well oiled up to the elbow, and as soon as the mouth of the womb has dilated sufficiently to admit four fingers, the hand should be introduced gently, but steadily in the absence of a pain, care being taken not to rupture the

membranes till the hand is well in the womb, so that the arm filling up its mouth may prevent the waters from escaping, till turning is accomplished.

This is easily done while the waters are in the womb; but when they have passed off, and the womb contracts firmly on the child and the hand of the operator, both the difficulty and the danger of turning are greatly increased.

The hand being fairly in the womb, the membranes should then be ruptured, and the feet searched for, in the absence of a pain; but while the womb contracts during a pain, the hand should remain perfectly still. If possible, both feet should be brought down; but after the waters have escaped this cannot always be managed; and, if not, one foot should be brought down and secured by a noose of tape, lest when the hand is being introduced to bring down the second foot, the first might pass up, and disappoint the operator.

When the feet are brought down, the labour should be left to natural efforts until the breech is expelled, and then it should be conducted just as a footling case, already described.

TWIN BIRTHS.

The appendages of the womb being double—two ovaries, and two ducts communicating with these on either side—the anatomy of the parts would lead us to expect two children at each birth; but experience proves that one is the common rule, and that any greater number is an exception. It is, however, certain that the womb can accommodate two, three, or four children at the same time; but the infants are generally weaker in proportion to the increased number, so that even triplets are seldom fitted for a separate existence after the birth.

One child is certainly enough for any woman to nurse and attend to; few mothers wish for more; and the announcement of a second is generally perplexing, from the want of any preparation for twins.

The symptoms before birth are not very assuring. The increase of size is no true criterion, because the same mother may appear as large when pregnant with one baby as she was formerly with two, owing to the presence of a greater quantity of water in this case.

By touching accurately over the womb, in the latter months of pregnancy, we get tolerably certain evidence, and can distinguish the separate bodies in cases of twins; but to hear with the stetho-

scope the heart of the child beating in different parts of the womb, is the only positive and reliable information.

Even after the birth of the first child, it requires some attention and discrimination to ascertain the presence of a second. Because each infant may have a separate placenta ; and this first being removed, and the patient bandaged and made comfortable, practitioners of considerable experience have been astonished when summoned to the birth of a second baby twenty-four hours, or perhaps one or two weeks, afterwards.

In twin cases the presentation generally varies, the first being a head, and the second a footling case, or the reverse of this.

It is the commonly received opinion that the danger to the mother is increased in proportion to the number of children ; but my experience does not support this conclusion. With proper care, I have seen twin and triplet cases do equally well as single births.

As it often happens that both children are nourished by the same placenta, the cord should not be pulled to remove the after-burden ; because any attempt to do so might cause dangerous, or even fatal, hæmorrhage. And consequently it is necessary in every case to ascertain if there be a second infant in the womb, before attempting to remove the placenta.

Being convinced that it is a case of twins, after the birth of the first infant the womb should be stimulated to contract, by keeping up a grasping movement of the fingers and thumb placed over the lower part of the abdomen ; and by this means the second infant will generally be expelled by natural efforts.

Should the mother be much exhausted, and the pains consequently inefficient, or should hæmorrhage set in after the birth of the first child, it would be advisable to give a dose of ergot of rye, half a drachm, powdered, infused in a small cup of water, and taken at once ; or, if preferred, to introduce the hand, bring down the feet, and hasten the delivery.

In twin cases especial attention ought to be paid to the contraction of the womb, which having been over-distended, and also fatigued, is apt to be relaxed and exposed to hæmorrhage, after the placenta or after-burdens are removed. Such patients should be carefully watched for at least two hours after their accouchement, lest too much wasting should supervene.

COMPLICATED LABOURS.

A natural labour may be complicated by the cord coming down ; by puerperal convulsions ; and by hæmorrhage before and also after delivery ; and every such complication requires the assistance of an accoucheur.

PRESENTATION OF THE CORD.

This is of vital importance to the infant, because, if the cord be compressed by the head, while passing through the bony pelvis, the child's life would in all probability be forfeited.

Some writers on midwifery advise, under such circumstances, to introduce the hand, bring down the feet and deliver, as has been described in cross births ; but as the result of turning is always attended with considerable risk to the infant, and great discomfort, at least, to the mother, this practice cannot be recommended. For the safety of the child it is only necessary to keep the cord above the brim of the bony pelvis until the head enters it fairly ; and this is easily done by wrapping a little woollen yarn around a fold of the cord, and then pushing the cord up beyond the child's head, and retaining it there until the head has entered the pelvis. The use of the woollen yarn is merely to prevent the cord slipping off the finger or article with which it is pressed up. The yarn must not be braced tightly around the cord, to impede the circulation of the blood ; nor is it necessary to tie the ends of the woollen thread, for, after a few turns around the cord, if the ends be passed between the folds of the cord next the operator, it is quite sufficient.

A finger is too short to push the cord far enough up, and it is also too bulky to be retained in the pelvis ; but a narrow piece of thin smooth whalebone, about a foot long and the fourth of an inch broad, suits admirably, and can be retained as long as it is required.

The absence of a pain must be waited for to push the cord up ; nor must any attempt be made to push up the whalebone during the continuance of a pain, lest it should irritate the womb or injure the child. If the cord should slip off the whalebone and descend again, it can be replaced in the same manner as at first ; and the same means are equally applicable and useful if the cord protrudes while the head is in the bony pelvis.

PUERPERAL CONVULSIONS.

These affections seem to be closely allied to epileptic fits, and females who have ever been subject to such seizures are particularly prone to puerperal convulsions during pregnancy and parturition, owing to the influence of the womb on the nervous system.

They may supervene at any period of pregnancy, but they are most apt to occur in the latter months, and especially during the process of parturition. And the patient may be affected without any premonitory symptom having preceded; but generally the attack is announced by flushing of the face, vertigo, dulness of sight, or ringing in the ears, which are soon followed by spasms of the face, distortions of the eyes, spasms of the arms and legs, and violent contortions of the entire body.

The breathing is very laborious, and the air from the lungs is emitted with a hissing sound, which, with an increased secretion from the salivary glands, soon causes foaming at the mouth. And as the tongue is generally protruded during the convulsion, it is necessary to protect it from injury by introducing something between the teeth; but any attempt to restrain the patient, further than to prevent her injuring herself, is more hurtful than beneficial.

The attacks vary very much, both in frequency and duration. If they be brief, and recur only after long intermissions, the prognosis may be considered favourable; but when the intermissions are short, and the convulsions severe and persistent, the recovery is always doubtful.

Treatment.—In all the cases in my practice the attacks were attributable to previous epileptic seizures, or to a deranged state of the stomach and bowels, the patients having eaten indigestible food, as roast pig, preserved fish, cooked oysters, together with pastry and other heavy articles; or having neglected to pay proper attention to the state of the bowels in the latter months of pregnancy. And being convinced that the preventive plan of treatment is invariably the most successful, I would earnestly advise all mothers to limit themselves to light, easily-digested food during pregnancy.

Some practitioners recommend bleeding largely from the arm as the best means of controlling the fits; but my experience does not enable me to sanction this, because the majority of my patients were of nervous, irritable temperaments, which are never served by loss of blood; and in some others, who appeared more plethoric, the use of the lancet had evidently no good effect.

Cold applications to the head and nape of the neck (ice being the most efficacious), and twenty grains of ipecacuanha with one grain of tartar emetic, in a small cup of water, as soon as the patient can swallow, are, in my opinion, greatly preferable to the use of the lancet. And the action of the emetic should be followed by one ounce of castor oil and one of turpentine, thrown up into the bowel as an enema, in a pint of thin gruel; the cold applications to the head being continued.

In addition to relieving the stomach and bowels, the emetic and enema have a salutary influence, by increasing the dilatation of the mouth of the womb, and thus facilitating the delivery; which, if the paroxysms be moderate, may be left to the efforts of nature. But if the attacks be frequent and severe, it is necessary to remove the central cause of irritation, and to hasten the labour by forceps, or by turning the child in the womb and bringing down the feet, as soon as the head is sufficiently advanced for the one, or the mouth of the womb properly dilated for the other.

If the paroxysms continue after the birth, the cold applications to the head should be maintained; and if the patient can swallow, she should get half an ounce of castor oil, with an equal quantity of oil of turpentine, to remove indurated portions that may be irritating the bowels. But if the power of deglutition is suspended, two drops of croton oil should be put on the root of the tongue, and repeated in four hours, if the bowels are not acted on.

The food of such patients should be entirely farinaceous; as arrowroot, rice, or maizena, boiled in water, and eaten with milk; and the drink should be toast-, barley-, or rice-water, or rennet whey. Tea and coffee are too exciting, and do not suit such patients; and all alcoholic drinks must be prohibited, as being quite inadmissible.

HOURLY CONTRACTION OF THE WOMB.

This complication of labour is very perplexing. After a labour perfectly natural, the placenta is retained; or if it is removed by force, a small portion remains, keeping up a continuous hæmorrhage, which although not very rapid or extensive, is very depressing to the patient, and annoying to the attendant.

The patient suffers frequent pains, which give reason to conclude that the womb is contracting sufficiently to throw off the placenta, but it does not come; and when the hand is placed over the womb, it feels oblong, and not sufficiently round.

This form of the womb is caused by spasmodic contraction of the circular muscles, while the longitudinal fibres fail to act; and by this means convert the womb into the form and appearance of an hour-glass.

Treatment.—To overcome this spasm, it is necessary to dilate the contracted portion, upon the same principle as persons having cramp or spasms of the legs stand up, and put the muscles on the stretch to cure the cramp.

To effect this purpose, the hand, being well oiled up to the elbow, should be introduced into the womb, which in such cases is found contracted in the centre, so as scarcely to admit two fingers; and in the absence of a pain the contracted part must be dilated gradually and steadily, until the hand can be passed to the top of the womb to separate the placenta, or perhaps some portion of membrane that may be still adhering.

During the presence of a pain, no attempt should be made to dilate; but the hand is not to be withdrawn, being allowed to remain still, so as to retain the advantage already gained, which is all that can be done, because the contractions, while they continue, are sufficient to paralyse any effort of the practitioner. But by steady perseverance the spasm finally yields, and the hand being carried up to the top of the womb, the placenta, or membrane, can be detached; and this done, the hand should be retained there, until the womb contracts firmly upon it, and then it should be withdrawn, and the placenta, or membrane, along with it.

By this means much suffering can be prevented, and the loss of much blood can be spared to the unfortunate patient; while the pouring of pailfuls of cold water upon the body, to prevent the hæmorrhage, and other barbarous expedients formerly adopted to cause the placenta to be thrown off, are happily dispensed with.

PRESENTATION OF THE PLACENTA.

Of all the complications of labour this is generally the most troublesome to the attendant, and the most dangerous to the patient.

The placenta, or after-burden, being, as we have already described, a network of blood-vessels, which form the communication between the mother and child, is generally situated at the top of the womb; but it may be placed at either side, and in this case it is implanted over the mouth of the womb. This latter position is

fortunately not very common, but when it does occur, it places the life of both mother and child in imminent danger.

After the sixth month of pregnancy, the neck of the womb becomes gradually distended at the upper part, so as to be finally absorbed by the enlarged womb, and at each distension of the neck, when the after-burden is placed across the mouth of the womb, a number of blood-vessels of the placenta are torn across, and the mother suffers a sudden loss of blood, which gives the first indication of the unfavourable position of the placenta.

Between the eighth and ninth month the dilatation of the neck of the womb is still greater, and the returns of hæmorrhage more frequent, and the loss of blood is often so great that, when the accouchement takes place, the vital fluid is nearly exhausted.

But the position of the placenta may be only partially over the mouth of the womb, being seated principally on one side, so that although considerable hæmorrhage may occur before the birth, yet the loss may not endanger the safety of either mother or child, and the issue may be favourable. Nor are we to conclude that hæmorrhage before the birth must in every instance be caused by this unfavourable position of the placenta, because it is equally certain that a sudden fright, fall, or other accident, by causing the womb to contract, may separate the placenta in whole or in part, no matter on what portion of the womb it may be situated. Besides the evidence of placental presentation is always obscure, until the dilatation of the mouth of the womb previous to the birth enables us to discern by touch its soft and pulpy substance; but when hæmorrhage occurs after the sixth month, without any exciting cause, we have reason to consider that the placenta is seated too near the mouth of the womb.

Treatment.—In every case of hæmorrhage before the birth, or during pregnancy, absolute rest is necessary for the safety of the patient and her offspring, and in cases of presentation of the placenta it must be insisted on, as any motion of the body, or excitement of mind, would increase the loss of blood. Perfect quietness is necessary; the patient's room should be well aired; her food should be farinaceous only; her drink toast-water or cinnamon tea; and cold applications should be made to the privates.

These means are generally sufficient to check hæmorrhage, until the period of gestation has nearly expired, and the mouth of the womb begins to expand, during the last month, or about two weeks

before the accouchement; when the loss of blood is often alarming, and requires, in addition to rest, cold applications and the use of the plug.

For this purpose an old soft silk handkerchief, moistened with oil, should be gradually introduced into the vagina, and pressed up gently but firmly to the mouth of the womb. And this, by causing the blood to coagulate, soon blocks up the mouths of the bleeding vessels, and arrests the hæmorrhage; while a small piece of ice, folded in the corner of the handkerchief first introduced, increases the effect.

After this period the patient must be constantly watched, because if labour-pains should set in, the plug might be expelled, and the life of both the mother and child imperilled, in a few minutes. The plugs should also be removed, and a fresh one applied every twenty-four hours, to prevent the unpleasant effluvia annoying the patient.

The responsibility of attending such cases is very great, and when once undertaken no other engagement can relieve from the imperative necessity for constant watching, as absence or neglect for a short time might sacrifice the life of two human beings. In every such case there is a propitious moment, which, if taken advantage of, the result may be favourable, but if neglected, must extinguish all hope. This critical period is when the mouth of the womb has dilated sufficiently to allow the aid of art, and before the life's blood is too far wasted.

If the placenta has been implanted too near the mouth of the womb on one side only, so that one edge alone has been separated by the dilatation, although there may have been considerable hæmorrhage, yet if either the head or feet are presenting, and the pains tolerably efficient, the interference of art is not required; because as soon as the presentation advances so as to compress the placenta, the loss of blood will cease; but if, on the contrary, a hand is found to present, there is no alternative, and the operation of turning must be proceeded with as soon as four fingers can be introduced.

If the position of the placenta has encroached still farther, say two or three inches across the mouth, the hæmorrhage being large in proportion, it is advisable to introduce the hand past the placenta, on the detached border, and turn the child without delay; for by waiting under such circumstances we may lose the opportunity of saving the child, and waste the patient's strength to such an extent that her recovery must be endangered, while so much of the red

particles of blood may be lost that she will remain blanched and apparently bloodless for life.

When the placenta is implanted fairly over the mouth of the womb it forms a complication of labour sufficient to test the judgment and decision of any accoucheur, and rendering it impossible to do more than save the mother.

The late Professor Hamilton instructed us in such cases to pierce the fingers through the centre of the placenta, introduce the hand, bring down the feet, and deliver the child, as soon as the dilatation of the mouth of the womb would permit; and his judgment and experience being valued by me, guided my practice, and caused me to follow his plan of treatment, which, acted on promptly, can scarcely fail to secure the safety of the mother.

Professor Simpson advises to introduce the fingers, and separate the placenta from the womb all round, and having delivered it, to leave the labour to natural efforts. Of this method I have no experience; but it has the advantage of allowing the mother time to rally, and some who have tried it think it preferable to the practice formerly adopted.

The after-treatment of patients who have suffered loss of blood in this way requires care and judgment. The constitution has not power to rally quickly, and must be nursed with patience to enable it to recover. Great attention should be paid to the state of the womb, which ought to be supported by a proper bandage.

During convalescence, one, two, or more weeks after the accouchement, hæmorrhage or flooding frequently supervenes, owing, perhaps, to the thinness of the blood and the patient indulging too much in the use of fluids. This tendency is lessened by a preference for light solid food, by abstaining from all alcoholic stimulants, and by taking a wineglassful of infusion of chiretta or quassia after breakfast, and ten drops of the solution of the perchloride of iron in a wineglass of water after dinner, commencing these about ten days after the birth, if no fever prevails.

The shower bath, after four weeks, tepid at first, and cooled down gradually, has a bracing effect, and should be followed by the plunge bath or sea-bathing in the season.

HÆMORRHAGE AFTER THE BIRTH.

In the article on Miscarriage we stated that hæmorrhage before the birth is seldom fatal; but when it sets in after the birth it is

more dangerous, and if not controlled, may destroy life. Some patients seem peculiarly prone to hæmorrhage; but in all the cases of alarming flooding that I was called to there was evidence of some exciting cause: the patient's stomach had been loaded with indigestible food shortly before the birth; the bowels were obstructed with indurated fæces; alcoholic stimulants had been indulged in during pregnancy, and allowed at the birth; or the necessary attention to the contraction of the womb had been neglected.

When the placenta is separated from the womb, loss of blood to some extent is the natural consequence, nor is any mother injured by a moderate loss, say from six to twelve ounces; but if the quantity exceeds the latter amount, it is calculated to induce weakness and syncope, which is always alarming. It is true that when the patient faints the hæmorrhage must cease for a time, and some persons consider it, therefore, a favourable occurrence; but it is a result never to be desired, because in too many instances the patient never rallies, and in others more favourable the loss of blood recurs with the returning animation.

Treatment.—If the womb be soft and relaxed, the hand should be placed over it, and a grasping action with the fingers kept up, until it is found to contract and become firm. A gush of blood, or the expulsion of a large clot, is apt to follow the act of contracting, and nurses become alarmed, and fancy that mischief is being done. This appearance is, however, perfectly assuring, and gives the best evidence that the treatment is salutary; and it is generally accompanied with a cessation of the hæmorrhage.

In some cases the womb is full and distended, but soft to the touch; while the patient is cold, pale, gasping for breath, and almost pulseless. Under such circumstances, friction over the womb fails to produce the desired contraction. The muscles have lost their tone or tendency to contract, owing to their being too long distended; and a clot of blood in the mouth of the womb prevents any present escape; so that without any external appearance the patient continues to waste internally.

Nothing but immediate assistance can rescue such an unfortunate sufferer from the jaws of death. The hand should at once be introduced into the womb, from which the clots and blood should be removed; and then the operator, by extending his fingers frequently, so as to touch the sides of the womb, should stimulate it to contract, while an assistant, by friction over the womb, endeavours to promote the same object, which must

be obtained before the hand should be withdrawn from the womb.

Such cases are truly appalling, and the responsibility is too great to be borne by one; so that a consultation, if possible, should be had to protect the character of the operator, and give confidence to the patient and her friends. We do not advise delay, nor is it admissible to await the arrival of a second doctor; but it is always right to have a second called, and it is doubly fortunate if he come to find the mother saved and the patient doing well.

Hourglass contraction, which has been already noticed, is another frequent cause of hæmorrhage after the birth; and as the method of treating it has been described, it is only necessary to add that plugging the vagina, so serviceable before the birth, is not applicable as a means of stopping hæmorrhage after the birth.

In some constitutions in which the blood is unusually thin, and the tendency to hæmorrhage proportionally great, any amount of contraction of the womb that can be obtained is not sufficient to seal up the mouths of the blood-vessels; and although the loss of blood is checked, yet wasting continues to weaken the patient and alarm her friends.

In such cases we must have recourse to the internal aid of gallic acid or tannic acid. The latter is preferable, and if given in doses of five grains in syrup or treacle, or in pill, every two or three hours, it seldom fails to control the wasting. Gallic acid in similar doses is also efficient; and in the absence of these, the acetate of lead in dose of three grains every three hours is an active medicine; but it should be given in water with half a teaspoonful of vinegar added to each dose, to prevent it causing colic; and it is more apt to disagree with the stomach.

The pallid countenance and evident prostration of strength with such patients make nurses and other uneducated persons prone to administer alcoholic stimulants in such cases. These I have always found to add fuel to the flame, and by increasing the action of the heart, to keep up the hæmorrhage. If the patient be faint, twenty drops of sal volatile, or twelve drops of fluid ammonia (hartshorn) in a wineglassful of infusion of cinnamon, every two hours till the patient rallies, have a much better effect.

Perfect quietness and confidence in her attendants are absolutely necessary; and distrust on the mind of such a patient is always ruinous; and all whispering or attempts at concealment in her presence are highly censurable. Candour in admitting the severity and

difficulty of the case always tends to secure the confidence of the patient, and if done with a cheerful, hopeful countenance, is always reassuring.

To regulate the food of such patients is a difficult task. The loss of blood from the system causes an insatiable craving for drink, which cannot be indulged, because by filling the blood-vessels hastily it keeps up wasting. Light solid food is alone admissible, and few patients in a weak state can relish this ; so that we are obliged to select something intermediate as a compromise. Light custard suits some, while others prefer jelly, seasoned with cinnamon powder, but without wine ; and half a teaspoonful of Liebig's essence of meat, or the essence of fowl, boiled in vacuo, once a day, is very invigorating.

Drink must be given occasionally, but not more than a wineglassful at a time, and toast-water, or imperial, made with cream of tartar, hot-water, sugar, and the juice of orange, or rennet whey, or cinnamon tea, should be given alternately, as a patient soon tires of any one fluid.

Constipation of the bowels is perfectly inimical to convalescence, and must be prevented by giving two grains of aloes and ten grains of salts, in syrup or treacle, at night, when required. In this form the action is most favourable, and free from griping ; but some patients prefer medicine in the form of pills, and if so, treacle should be used and not mucilage, to make the pills. When mucilage is used, the pill becomes so hard that it does not dissolve in the stomach, and acts only on the lower bowel, causing unnecessary and unpleasant griping.

When the female constitution has been reduced by severe hæmorrhage after the birth, it is very desirable that impregnation should not occur again until the system has got time to rally, a period which is very variable, and cannot be determined by any fixed limit ; but not sooner than two years. The shower bath, tepid at first, but cooled down afterwards, is very salutary, and sea-bathing in the season is highly commendable ; while travelling, by giving change of air and of scene, conduces greatly to the health of mind and body.

FEVERS THAT OCCUR AFTER LABOUR.

THE WEED.

This is the popular name given to an ephemeral fever which occurs after accouchements, and continues about twenty-four hours, being caused by mismanagement on the part of the nurse. The patient's

room has been kept too close, and her bed-covering too heavy, so that for some days she has been constantly perspiring, and the papillæ of the skin so elevated that she is covered with a miliary eruption, called the sweat rash. While she is in this state some visitors call, and finding the room so suffocating, throw open the doors and windows ; thus exposing the patient to a draught or current of air, to which she has not been accustomed. Or the patient, being overheated, may, in her sleep, have uncovered her arms and chest, so as to get chilled ; or she may have suffered a similar injury while suckling her baby. A rigor, or shivering fit, is the natural consequence, and ushers in this slight fever, with the usual accompaniments of loss of appetite and depression of spirits.

Treatment.—The interrupted action of the skin having caused a determination to the sister membranes lining the stomach and bowels, our first duty is to relieve these, by giving an emetic of twenty grains of ipecacuanha in a cup of tepid water ; which having acted, should be followed by a dessertspoonful of Epsom salts, in a cup of ginger tea. And to restore the action of the skin, after the bowels have been moved, we should give five grains of Dover's powder in a little syrup, at bedtime, to excite perspiration.

Increased care must be taken for some days afterwards ; and attention should be paid to the state of the bosoms, which are liable to become inflamed after such attacks if badly treated. If any tumours form in the bosom, they should be rubbed, every four hours, with fluid ammonia (hartshorn), until they disappear ; and the dose of Epsom salts should be repeated.

GASTRIC AND ENTERIC FEVER.

This form of fever after labour is always attributable to maltreatment of the stomach and bowels. The patient has eaten food too rich and too heavy, or has indulged in too great a variety, so as to overload the digestive powers.

This fever is more serious than the weed, and continues much longer, but it is not so dangerous as puerperal fever, from which it is distinguished by commencing in the stomach and bowels, and not in the womb, and by the absence of that prostration so characteristic of puerperal fever.

It is not ushered in with a rigor, as the weed, but the tongue is coated, the appetite deficient, and the bowels constipated, and distended with flatulence. Some patients complain of dimness of sight

and vertigo ; but the usual lochial discharge, and the secretion of breast-milk are seldom interrupted.

Treatment.—The bowels should be unloaded by an active purgative, and half an ounce of turpentine, with an equal quantity of castor oil, given in a little warm milk, is a safe and efficient medicine, which should be repeated for two days in succession. Some patients cannot, however, be persuaded to take this medicine ; and these should have half a grain of podophylline, with ten grains of Epsom salts, in a little syrup or treacle, to be followed by a dessertspoonful of salts in a cup of ginger-tea, if it does not act in eight hours ; both to be repeated on the following day.

To relieve the heat of the skin and abate feverishness, the patient should have half a teaspoonful of the acetate of ammonia, commonly called Mindererus's spirit, in a cup of toast-, barley-, or rice-water, every two hours ; and until the tongue cleans this is sufficient food, because while fever prevails the power of digesting food is in abeyance, and anything approaching to solid food only punishes the patient.

After the second dose of turpentine, or of podophylline, the bowels should be regulated by two grains of aloes and ten of salts, given at night, and, if necessary, followed by a teaspoonful of salts, in a cup of ginger tea, next day.

As soon as the tongue begins to clean there is evidence that the power of digesting food is returning, and the patient should get a cupful of ground rice, arrowroot, or maizena, boiled in water, and eaten with milk, twice or thrice a day ; and if this be borne well for a day or two, a little beef or mutton tea, or chicken broth, with stale bread, can be tried once a day for dinner.

Solid animal food must not be returned to hastily, or the fever will be prolonged, and the recovery retarded. When resumed it should be very light and easily digested, as roasted pullet, with toast or stale bread ; and the patient should take half a grain of quinine, or a wineglassful of infusion of chiretta or quassia, after dinner, each day ; but ale, porter, wine, and all alcoholic stimulants should be abstained from.

Having had an attack of fever, the patient must not be hasty in leaving her bed. A few days, with proper care, may terminate the fever and establish the recovery ; but any indiscretion on the part of the patient may renew the attack, and make convalescence very tedious.

INFLAMMATION OF THE WOMB AFTER LABOUR.

This is indicated by pain in the womb, extending to the back and generally to the thighs, the pulse being full and frequent—a hundred beats in the minute, or perhaps above that number.

It is distinguished from after-pains, which intermit like labour pains, while the pain of inflammation is constant, and does not generally commence till the second or third day, when after-pains have ceased. The womb when pressed feels hard, and is painful to the touch, and the lochia, or natural discharges, are lessened or suppressed.

Inflammation of the womb is sometimes taken for puerperal fever, and when the inflammation extends, as it often does, to the ovaries, (broad ligament of the womb), and to the peritoneum, it requires some experience and power of discrimination to form an accurate opinion. The most distinctive mark is, however, the absence of that prostration which is so characteristic of puerperal fever, while the pain of inflammation is more acute.

It is not a very common occurrence, and is always caused by some unusual exposure, or liberty taken by the patient, before the constitution is sufficiently recovered. As it is an invariable rule that, when exposed to cold or any other cause of injury, the effect is first felt on the part of the frame that is weakest, so the womb having been weakened by its late efforts in parturition, and by the altered state of the circulation of the blood to it, is rendered particularly liable to inflammation.

The arrest of the circulation to the womb after birth is in a great measure compensated for by the determination to the bosoms, and the secretion of breast milk; but the influence of habit is very great, and this continuing as a predisposing cause, makes all mothers subject to inflammation of the womb, if exposed to cold, or if the womb be irritated by sympathy with an injured stomach, by sitting erect, or by attempting to walk too soon.

Many mothers feel so well on the second day after their accouchement, that they fancy they could travel a journey; and forgetful of that very sensitive organ, the womb, they often eat, drink, and move about as if they could not be injured. And to this cause we must ascribe the unnecessary suffering and frequent loss of life after parturition.

Treatment.—As the first symptoms of this disease are pain and a stoppage of the natural discharges, we must endeavour to alleviate

the former and restore the latter. Fomentations with flannels, wrung out of hot water, or still better, with bladders filled with hot water, and properly secured and applied over the lower parts of the abdomen and to the privates, have a good effect; and a tablespoonful of Epsom salts, given in a cup of ginger tea, to unload the bowels, acts similarly.

After the bowels have been freely acted on, the patient should get six grains of Dover's powder in a little syrup, to be repeated every six hours, until perspiration is produced and the pain relieved, the fomentations being continued meanwhile.

If these means fail to remove the pain in twenty-four hours, leeches should be applied over the womb, from six to twelve, according to the strength of the patient; and the fomentations should be continued, while the bowels are acted on by the salts every day, and the Dover's powder given every night, to alleviate pain and keep up perspiration.

If one application of leeches has not subdued the inflammation and removed the pain, which is easily ascertained by making pressure over the womb, they should be repeated every day until the symptoms are improved.

When the inflammation has been neglected too long, and change of structure allowed to supervene, the above remedies may fail to produce the desired effect, but they must always lessen the amount of suffering and render the issue more favourable.

In cases that have been attended to early, after the constitution has been relieved by the action of the bowels, by perspiration, or by leeches, the natural discharges gradually return; breast milk is secreted; the pulse falls to about eighty in the minute; the womb is free from pain, and the patient, formerly anxious and restless, becomes composed, and sleeps well.

In neglected cases the abdomen becomes tense, the peritoneum being filled with flatulence, the pulse, though frequent, is small and weak, and occasional shivering fits indicate that suppuration has taken place. These symptoms are unfavourable, but should not lead us to despair.

To reduce the enlarged state of the bowels, flannels wrung out of hot water, and sprinkled freely with turpentine, should be constantly applied, not so as to blister but to keep the skin red; ten grains of Dover's powder should be given each night to reconcile sleep; the bowels should be moderated by giving a dessertspoonful of Epsom salts in a cup of ginger tea when required, and the patient's

strength supported by chicken broth, beef or mutton tea, or Liebig's essence of meat, until the matter that is forming in the womb is thrown off.

This often occurs in a sudden gush of purulent fetid matter, giving immediate ease to the patient, and banishing all our fears. It is true that fatal cases do occur, but I have had the good fortune not to meet with them.

But although our dread of a fatal issue has been dispelled by the escape of the purulent matter, still the difficulty of treating such a case has not terminated. Uneducated nurses and kind friends imagine that the patient, weakened by the previous suffering, requires rich food and alcoholic drinks to strengthen her, and they can seldom be persuaded that it is only the robust who can digest heavy food, and the strong who can bear alcoholic stimulants.

The constitution should be supported by light nourishing diet, easily digested by the patient, and by the use of tonics; half a grain of quinine after breakfast and dinner, or, if this gives a headache, a wineglassful of infusion of chiretta or quassia as often.

PUERPERAL FEVER.

Of all the diseases to which mothers are subject after their accouchement, this must be considered the most dangerous and fatal.

In hospitals it occurs frequently as an epidemic, being highly contagious; and the same tendency is often observed in private practice, many fatal cases occurring to the same practitioner in succession, the poison, or infection, having been conveyed by him from one to others.

The causes of the malignant character of this disease are still subjects of dispute. Some attribute its fatality to inflammation of the womb and peritoneum, while others consider it owing to a diseased state of the blood—which latter seems the more reasonable conclusion. Still the difficulty of accounting for this diseased state of the blood remains unsolved, as we find this fever occurring after easy and safe deliveries, as well as after painful and complicated labours.

The symptoms of this fever are somewhat similar to inflammation of the womb, as this organ is affected in both these diseases; but a little experience enables the practitioner to recognise this fever by the preceding rigor or shivering, the frequency of pulse, the marked depression of spirits, the nausea or vomiting, the headache, the

sleeplessness, accompanied with delirium, the swelling of the abdomen, which is painfully tender to the touch; the short, difficult breathing, characteristic of this fever, and the desponding aspect of the patient.

The patient's countenance is distinctive. It is pale, anxious, and ghastly; the eyes are dull and heavy; the cheeks are crimson, while the brow and rest of the face are pale and covered with perspiration; and the dejected patient lies on her back with her knees drawn up.

The tongue is coated, white at first, but it soon becomes brown, with evidence of thrush on the tonsils and fauces. The skin is relaxed and clammy. The secretion of milk is suppressed, as are also the natural discharges, or, if present, they are peculiarly offensive.

The urine is dark coloured, with a brown sediment; and the bowels, which are costive at first, are soon attacked with diarrhoea, the dejections being unhealthy and very fetid.

This fever attacks patients from the second to the seventh day after the accouchement, and it is noticed that when the disease sets in early it is more virulent, and the chances of recovery less than when its attack is longer deferred.

As the disease advances, if the tongue cleans and the pulse becomes firmer and more distinct, the appetite returning, with refreshing sleep and no delirium, we have reason to hope for a favourable issue and the patient's recovery.

But the continuance of the dark-coated tongue, a weak, tremulous pulse, great prostration of strength, increased difficulty of breathing, and insensibility to the calls of nature, the stools passing involuntarily, are very unfavourable omens and indicate a fatal result.

Treatment.—The early use of the lancet, and bleeding freely and repeatedly from the arm, was the practice recommended by the late Dr. Hamilton, of Edinburgh, and by Dr. Burns, of Glasgow, both in his lectures and system of midwifery, and generally adopted some forty years ago. Since that period an important change has taken place in the treatment of contagious diseases, and the use of the lancet is now generally dispensed with.

During the last twenty years I did not bleed a single patient suffering from puerperal fever, and I am convinced that the recoveries were more numerous, and the convalescence more favourable than when such patients were bled from the arm early and frequently.

The sinking tendency of the fever on the system does not require to be increased by depletion. On the contrary, something is required to improve the state of the blood and arrest the decomposition of the fluids, and for this purpose our best aids are the mineral acids and turpentine.

To unload the bowels, which are usually constipated at the commencement, half an ounce of turpentine, with an equal quantity of castor oil should be given at first, and repeated every morning until we have evidence that all indurated masses have been removed from the bowels. And to allay thirst, abate fever, and improve the state of the blood, fifteen drops of diluted sulphuric acid should be given in a wineglassful of toast-, or rice-water every hour or two hours, as thirst prevails, and to protect the teeth it should be taken through a quill or glass tube, or cup with a long beak.

To allay pain and induce sleep six grains of Dover's powder should be given in a little syrup each night after the bowels have relieved, and if diarrhoea supervene, as it generally does in the progress of this disease, the Dover's powder should be increased to ten grains, so as to effect a double service.

But nausea and sickness at stomach are often so distressing that oil or any bulky aperient cannot be retained on the stomach; and in such cases the turpentine and castor oil, one ounce of each, mixed with a quart of thin gruel, should be thrown up as an enema into the bowel. And in addition to this, two drops of croton oil, on a piece of sugar, should be given by the mouth, and repeated every six hours, till the bowels act freely; after which a teaspoonful of Epsom salts, in a cup of ginger tea, each morning will be sufficient to regulate the bowels.

The distension of the abdomen by flatulence is always a distressing feature in this fever, causing a great deal of local pain and difficulty of breathing, and it is best treated by turpentine, which is a specific for this malady. Flannels, wrung out of hot water, and having turpentine freely sprinkled on the side next the skin, should be constantly applied over the abdomen, and repeated sufficiently often to keep the skin red, but not to blister. And if this external application is not sufficient to remove the flatulence, twenty drops of turpentine, put on a lump of sugar, and then dissolved in a wineglassful of sweet milk, should be taken by the patient every two hours, which I have found to be the most sustaining tonic that I have ever tried, greatly preferable to either wine or brandy, in fevers of this type, whether puerperal or typhoid.

As soon as the tongue cleans and the appetite returns, the patient should have quinine, of which thirty grains, with one drachm of diluted sulphuric acid, mixed in four ounces of water, should be given in teaspoonful doses, twice a day, after food. Ground rice, arrowroot, or maizena, boiled in water, and eaten with milk, is the most suitable at first; but after a day or two beef or mutton tea or chicken broth can be used once a day for dinner, together with a little toast or stale bread. Solid animal food must not be commenced too soon, being of the lightest kind, and tried cautiously, commencing with a little roast pullet, or white fish, if relished.

When convalescent, the shower bath, tepid at first, and cooled down afterwards, is invigorating, and does much in restoring lost energy and hastening the recovery; and sea-bathing, if seasonable, is also serviceable.

THE SWELLED LEG AFTER LABOUR, OR PHLEGMASIA DOLENS.

This is a painful swelling of the limb, which sets in shortly after labour, about the end of the first week, and sometimes later.

It is evidently caused by some obstruction to the circulation of the venous blood, and a diseased state of the absorbents; and it is met with chiefly in patients who have suffered from hæmorrhage after the accouchement.

The part at which it commences is variable, as it appears first occasionally in the foot, and extends to the groin, or it may commence at the groin and descend to the foot; the whole limb being swollen and tense.

The swelling is not similar to that of anasarca; for when the skin is pressed with a finger over the swollen part, it leaves no indentation or impression; on the contrary, the surface seems elastic and firm to the touch; but always painful. The skin also retains its natural colour, being free from blush or redness, and whiter, perhaps, than usual, while it is particularly smooth and glistening.

In all the cases that came under my notice the patients had suffered from too much loss of blood, either before or after the birth, and had got up too soon ere their strength was restored. And they were mothers who had borne two or more children, and had formerly made good recoveries; so that it seemed apparent that this malady was produced by some indiscretion.

It is not a fatal disease, but the pain is often acute, and the swelling of the limb, which is always tardy in abating, renders the

patient very helpless; and after the swelling is removed, the muscles remain stiff and inactive, and the limb useless for a considerable time. In cases that have been neglected or badly treated, the swelling, after leaving one limb, may attack the other; and tedious, unmanageable ulcers may form on the diseased limb.

Treatment.—The horizontal position and perfect rest are necessary in every case of swelled leg after birth; and to unload the biliary ducts and the bowels is an important object, which should be attended to immediately. Half a grain of podophylline and ten grains of Epsom salts should be given in pills or a little syrup; and the bowels being relieved, we should endeavour to alleviate the pain of the limb.

The position of the limb has considerable influence, and the leg should be elevated on three pillows, with two under the thigh, so as to form an inclined plane. Patients suffering from this malady wish generally to lie on the back; but to change to the side occasionally is preferable, the limb being raised on pillows and the knee bent comfortably.

☛ To obtain sleep at night an opiate is generally required, and six grains of Dover's powder, given in a little syrup, does a double service, by exciting perspiration and relaxing the skin, so as to relieve the system. If opiates disagree with the patient two grains of hyoscyamus may be substituted; but one of these should be given every night, the bowels being kept open by a dessertspoonful of Epsom salts, taken in a cup of ginger tea next morning.

As a local application some are partial to fomentations with flannels, wrung out of hot water, and applied frequently to the swollen limb, and also to leeches, put on the upper part, near the groin; but all the cases of ulcers on the limbs of such patients, that came under my notice, seemed attributable to the irritation of leech bites, or to the effect of too much moisture from the fomentations that had been used.

Fluid ammonia (hartshorn), the strong is the better, applied with a feather or a camel's hair brush over the limb night and morning, leaving the parts exposed for a few minutes till the hartshorn evaporates, lest it should blister, is the best application that I have tried. It soothes the pain, and stimulates the absorbents to remove the swelling, while it is followed by no evil consequences.

If the baby has been stillborn, and the preservation of breastmilk unnecessary, the iodide of potassium, in two grain doses, after food, thrice a day, has a decided influence in hastening the recovery; but

if the patient be suckling, we must be satisfied with the aid of cream of tartar, given in her drinks, so as to make them tolerably tart. This acts on the kidneys, and has a good effect.

During the first week the food should be farinaceous only; but after that, if the patient is suckling, the constitution must be supported with beef or mutton tea or chicken broth or the essence of meat. And as soon as the swelling begins to subside solid animal food of a light kind can be given once a day, together with one grain of quinine after breakfast and dinner, or, if it causes headache, a wineglassful of infusion of camomile or quassia may be substituted; but alcoholic stimulants only irritate the system, and are injurious to most patients.

PUERPERAL MANIA.

This is a species of insanity which attacks mothers while suckling, the predisposing causes to this disease being hereditary tendency and a weak irritable constitution, such patients being invariably dyspeptics, and the stomach unable to assimilate nourishment sufficient for two.

The attack often sets in suddenly and insidiously, without any premonitory circumstances or symptoms. One of my patients, the mother of two children, about a month after her last confinement, complained of heartburn and want of appetite, for which I prescribed, directing that her food should be light and easily digested, and that she should take more exercise in the open air.

A few evenings afterwards I called to ascertain the effect of the medicine I had ordered.

The door of her residence, a cottage, was open, and the servant who had charge of the elder child being absent, I asked if there was any one within, when she answered in the affirmative, but not in her usual tone of voice; and as there was a light in her room, I went in, just in time to rescue the infant, whose throat she was about to cut with a common table knife.

She was naturally a very fond parent, always over-anxious about her offspring, and until that evening had betrayed no change of feeling towards it; but she was now so determined to kill it, and became so violent, that I had great difficulty in wresting the knife from her hand; and when it was thrown to the opposite side of the room she struggled hard to retake it, and was not easily restrained.

When her husband came in shortly afterwards she abused him in

such language as I had seldom heard before, and remained so violent all night that next morning we were obliged to apply a strait-jacket to confine her. Still she recovered perfectly, nor had she any similar attack while suckling her third baby; but after that I lost sight of her, as they removed from Sydney to the interior.

In most cases of puerperal mania there are some premonitory symptoms; the patient's manner is altered; she is more feverish and impatient than natural; she thinks it a trouble to suckle her infant, or attend to it; cannot bear to be thwarted in her wishes, and becomes violent when contradicted. Such are strong indications of a diseased state of mind, and when they appear mothers should never be left alone with their babies.

Treatment.—To wean the child, or provide another breast for it, is absolutely necessary even in mild cases; for, in addition to the safety of the child, the recovery of the mother requires it. In some cases the secretion of breast milk is suspended, and in the mildest cases it is greatly diminished, so that nothing can be gained by allowing the patient to continue to suckle.

In the management of such patients, strangers are greatly preferable to relatives or friends for nursing them. Their reason being dethroned, they dislike all whom they formerly loved, and will yield obedience to any stranger more readily than to a near relative or fond husband. The influence which some doctors and nurses obtain over them seems almost mesmeric; and if it be possible to control them by mild measures and reasoning, harshness should not be resorted to; but in some instances, for their own safety, it is necessary to apply a strait jacket to restrain them.

A warm bath at 100° Fahr. for half an hour or longer, the heat being kept up meanwhile, and cold cloths applied to the head, has a soothing influence, and generally reconciles the patient to take a little medicine, which would otherwise be objected to.

Aperient medicine is always the best to begin with, for, until the bowels have been freely acted on, anodynes have no good influence. Half a grain of podophylline and one grain of aloes should be given in pill, and repeated in twelve hours if the bowels are not fully acted on. If the patient cannot be persuaded to take this dose, two drops of croton oil should be put on a piece of sugar, and, having given a piece without oil, the other should then be given, and repeated every eight hours till it acts freely.

The warm bath should be given every night for the first three, and then twice a week during the treatment.

Wakefulness is a constant accompaniment of this disease, and until sleep is obtained little improvement can be made.

Opium, combined with ipecacuanha, in the form of Dover's powder, generally succeeds. And, after the bowels have been unloaded, ten grains of Dover's powder should be given in a little syrup every evening; but some patients do better with ten grains of camphor, powdered by dropping a little spirit on it, and given in syrup or in pills, with two grains of hyoscyamus, each night. The bowels, meanwhile, must be regulated by two grains of aloes and ten of salts in a little syrup, as often as required.

Chloroform is a powerful composer, and in some cases has a marked effect; but it is too hazardous a remedy for household use.

The food of patients suffering from puerperal mania should be very mild, consisting of rice, arrowroot, or maizena, boiled in water and eaten with milk, until sleep is procured; and then beef- or mutton-tea or chicken-broth can be given, with toast or stale bread, for dinner.

Toast-, barley-, or rice-water, with a little cream of tartar in it, is the best drink; but tea and coffee do not suit such patients, and all alcoholic drinks are pernicious to them.

As soon as reason resumes her sovereignty, and the patient is convalescent, solid animal food should be allowed; choosing, at first, that which is light and easily digested, in small quantity, once a day, for dinner.

The shower bath is particularly serviceable to such patients, tepid in winter, and cold in summer; and sea bathing, if in the season, is also suitable. And travelling, by giving change of air and scene, is highly conducive to perfect recovery.

PART III.

THE TREATMENT OF CHILDREN.



WASHING THE INFANT.

IN the article on natural labours we have noticed that, after the child has breathed or cried freely, the cord should be tied with six plies of silk or cotton thread, about two inches from the infant's body, and with another ligature one inch nearer the placenta or after-burden; and then cut, with a sharp pair of scissors, in the centre between these ligatures. And the reason for using six threads to tie the cord is, that the bloodvessels may be sufficiently compressed, without being cut by the ligature.

When the infant is thus separated from the mother it should be wrapped in flannel and handed to the nurse, to be washed in water about the temperature of 90° Fahr. Some recommend that the infant be washed in cold water to make it hardy, and prepared to bear changes of climate; but as the temperature from which it was lately removed was 98° Fahr., a cold bath, say at 60° Fahr., must be too violent a transition, and could neither be agreeable nor safe for the young infant.

On the contrary, warmth is absolutely necessary for the wellbeing of young children, and exposure to cold at an early age has in many instances proved fatal to babies.

A bason, large enough to hold water sufficient to cover the body of the infant, is preferable to a smaller quantity, as the body can be thoroughly washed without exposing it to the cold air; and a sponge or piece of soft flannel facilitates the washing. The cuticle or scarf skin of the infant is too thin to bear the action of soap, which should not be used in washing infants. Water alone is generally

sufficient, at this period of life, for all the purposes of cleanliness; but if anything more detergent is thought necessary, oatmeal or bran is greatly preferable to soap.

The eyes of infants are subject to ophthalmia, which is frequently the result of carelessness in washing the infant. The water and sponge which have cleansed the body should not be allowed to come in contact with the eyes; but fresh water, and a clean piece of sponge or flannel, should be used for washing the infant's face and eyes. When this has been neglected, and the mother has suffered from whites or other mucous discharge previously to the birth, destructive inflammation of the eyes has too often followed.

Inspissated mucus is apt to accumulate on the opening of the child's head, and nurses generally dread the removal of this, as they consider it necessary to protect the brain, until the bones of the skull close in. But for this purpose it is perfectly unnecessary; and as it is unsightly, and prevents the natural action of so much of the skin, it should be washed off with oatmeal or bran.

When the infant has been perfectly washed, it should be carefully dried with a very soft towel. As any moisture allowed to remain in the armpits, or in the folds at the groins, seldom fails to cause excoriation of the skin of these parts, it should be carefully guarded against. Even after careful drying it is a wise precaution to use a little dusting powder, to absorb any damp that might possibly lodge about these parts, and cause irritation.

DRESSING THE INFANT.

Before commencing this operation the cord or navel string should be carefully examined, lest there be any tendency to hæmorrhage or bleeding from it, for when the cord is thick, as sometimes happens, although it may have been firmly tied, yet, when the cellular substance gets time to collapse, the bloodvessels may not then be sufficiently compressed, and a loss of blood may occur, which any delicate infant cannot bear with impunity.

If there be any appearance of blood escaping, a single thread of strong silk or linen should be tied firmly over the former ligature, so as to control the bleeding. This being done, the cord should be wrapped in two or three folds of old calico or linen, and turned up towards the child's breast, and retained in that position by a fold of soft calico placed around the infant's body, lest the moisture from it, if allowed to hang down, might scald the groins or privates.

Nurses are very scrupulous in requiring the rag that infolds the cord to be scorched or burned. Now, the only advantage of this is to make the rag perfectly dry; but this is often carried to excess, and the rag is converted into a powder, which soon falls off, leaving nothing to absorb the moisture from the navel string.

The navel requires to be still farther supported by a roller of flannel around the body, lest the aperture through which the bloodvessels formerly passed to nourish the infant should allow rupture of the bowel to take place, when the child cries. This roller is often made much too long. One turn and a half around the body is quite sufficient, and more is only calculated to keep the child unnecessarily hot. Nor should the roller be tied too tightly. Moderate support is all that is required.

The child's roller should be fastened with shielded pins, or better if stitched on; and it ought to be slack enough to allow the nurse's hand to pass down between it and the body. If it be tighter than this it may cause rupture at the groins, by pressing the bowels downwards; or it may impede the child's breathing by preventing the action of the diaphragm.

The dress of an infant should be regulated by the climate and season, being more abundant in winter than in summer; but flannel is the best material in all seasons. If pins be used they should be shielded, as the pricking of a pin may do much mischief. Medical men have often been called to treat what was supposed to be inflammation of the child's bowels, and found that the suffering was caused by the point of a pin piercing the child's body.

The infant's head was formerly warmly clothed, but modern experience has established a better and general rule of covering the head very lightly. Some practitioners prefer leaving the head without any covering; but, excepting the few infants that are born with hair, the bare scalp does not look well, and a cap of thin muslin cannot injure. It is certain, however, that the large quantity of blood circulating through the brain in infancy renders covering for this part unnecessary.

The great object is to protect the child's head from draughts, & a current of air blowing on it; and also from being scorched by the heat of a fire; exposures of this kind often do much injury to children, especially young infants.

Much of the infant's comfort depends on attention being paid to its napkins. As the discharges from the bowels and bladder are frequent, the napkins should be constantly attended to, and when

moist or soiled should be removed immediately, and replaced with fresh ones well aired. By such care habits of cleanliness are easily inculcated, and children are soon taught to attend to their own wants, as dirty children are always made so by careless nursing.

FEEDING THE INFANT AFTER BIRTH.

It is a common but pernicious custom to give infants, shortly after birth, a quantity of sugar and butter mixed together, or panado, or gruel, to carry off the meconium, or first contents of the bowels; which is a dark green substance, that seems to be bile secreted by the liver. Such dosing for this purpose is perfectly unnecessary, and cannot fail to irritate the sensitive stomach and bowels of the infant.

Nature has provided a remedy, mild in proportion to the delicacy of the lining membrane of the stomach and bowels of the infant, and more efficient than the coarse ingredients alluded to. The colostrum, or fluid which is formed in the mother's bosom at the time of birth, acts as an aperient on the infant, and is the proper medicine for removing the meconium. And to enjoy the benefit of this kind provision of the Great Donor of every good, the infant should be applied to the bosom as soon as the mother has rallied sufficiently to be able to bear it—say from six to twelve hours after the birth.

Few mothers secrete milk at this early period. Nor is it desirable that they should, as we know that the colostrum acts most favourably when it is least diluted with breast milk. The greater number of mothers have no considerable quantity of milk before the third day, and as the Almighty's arrangements are all perfect, there must be some provision for the sustenance of the infant during this period. This supply is not apparent to the eye of the observer, but it is evident to those who know the anatomical construction of the infant's chest.

At the time of birth a substance of considerable size, called the thymus gland, occupies the upper part of the chest, and this gland must be removed by the absorbents to allow the lungs to expand fully, and to take in a sufficient quantity of vital air to support the infant. And the contents of this gland, taken by the absorbents into the system, seem quite sufficient to nourish the infant during the first three days of its existence.

The sooner this gland is removed by the absorbents the stronger

and healthier will be the child ; and consequently the feeding given by nurses to children is not only unnecessary, but also injurious. A teaspoonful of toast-water, kept warm and made palatable with a little sugar, given at intervals to keep the child's mouth moist and prevent it from crying, is all the food that any infant requires until breast milk is secreted ; and anything heavier or more abundant should be carefully forbidden and avoided.

Meanwhile the habit of sucking its fingers should be guarded against by stitching the child's sleeves to its body dress.

If the meconium does not, however, pass off in the course of the first or second day, it is necessary to give the infant a mild aperient, and a teaspoonful of manna dissolved in a little hot water is generally sufficient ; but if this seems tardy in acting, a small piece of white soap, about an inch long, cut round in the thickness of a pencil, and pushed gently up into the bowel, stimulates it to act.

Such mild means do not always succeed, and in some instances the bowels of infants are so obstinate that castor oil, given in teaspoonful doses, three or four times at intervals of six hours, has not produced any effect. This torpidity of the bowels is caused by inactivity of the nervous system, and is always associated with congestion of the brain, produced, in every instance that occurred in my practice, by gross feeding which had been given to the infants for the purpose of carrying off the meconium. To relieve this torpidity electricity applied to the region of the bowels, gently at first and increased gradually, has the happiest effect ; but as this requires the aid of a medical practitioner, it does not suit as a family remedy, and something is wanted with which nurses are more familiar. This we have in a warm bath at 98° Fahr., into which the infant should be immersed from the shoulders down, while a rag dipped in cold water is applied over its head. The bath should be continued for ten or fifteen minutes, the head being kept cool meanwhile ; and if the bowels do not act, the bath and cold applications to the head should be repeated every six hours for two or three times until the bowels yield.

In male children retention of urine may sometimes cause constipation of the bowels, owing to the distended bladder pressing on the lower bowel, and thus impeding its action ; and nurses should be careful to ascertain that children pass water, which is equally as important as the passing of the meconium.

For relieving retention of urine, a flannel wrung out of hot water, and placed over the lower part of the bowels and privates, is generally

sufficient ; but if this does not succeed, there may be some obstruction in the passage, and a medical practitioner should be consulted as soon as possible.

The bowel may also be obstructed ; and in cases of malformation the fundament may be occult, the bowel terminating in a shut sack, in place of the natural aperture, and constituting a difficulty which can be overcome only by the hand of the surgeon.

CRADLES UNNECESSARY IN NURSING.

We stated in the article on natural labours that every mother should have the enjoyment of suckling her own infant, and that the pleasure to be derived from society or any other source can never recompense the mother who possesses a well-regulated mind for the privation of this happiness.

But although the task is delightful, and the secretion of milk natural to the female constitution, yet we know that many mothers injure their own health as well as that of their infants by want of method in nursing, and by not adhering to fixed hours and regular periods for suckling their babies.

To allow the infant to remain at the bosom the greater part of the night, and to be suckled every hour, or even every two hours, during the day, is a great mistake, and cannot be long borne by the mother with impunity ; while it is invariably injurious to the infant by overtaxing its stomach.

This constant drain is too exhausting, and soon tells on the constitution. Some robust mothers may bear it for a time ; but headaches, pain of back, and general lassitude, soon supervene, to inform them that they have transgressed the laws of nature ; while others more delicate become perfectly dyspeptic, and get puerperal mania, or that species of insanity which results from undue lactation in nervous temperaments.

Nor are infants less injured by this want of system in nursing than their mothers are ; because food to be properly digested must be taken at regular intervals ; and fresh food put into the stomach while the former meal is still undigested cannot fail to interrupt the process of digestion, and by that means starve the child or the person it is intended to nourish.

If the child is robust and endowed with a stomach possessing sufficient contractile power, it will reject the greater portion of the superfluous food, and this gives these children a degree of protection ;

but even they must suffer from constant nausea of stomach, which cannot conduce to perfect digestion of their food.

But delicate infants are less fortunate; their stomachs, being weak and relaxed, retain the breast milk or other food until it ferments, and passes down into the bowels in this acid, irritating state, which causes them frequent colic and unceasing suffering from constipation, or else constant diarrhoea, with green, unhealthy, and wasting evacuations.

This sad state of things for both mother and child is easily avoided by allowing infants to suckle only every three hours, from six o'clock in the morning till twelve at night; nor should other food be given in the intervals under any pretext, except a little toast-water sweetened, to moisten the child's mouth should it cry during the night.

Experience has convinced me that to be suckled seven times—every three hours from six in the morning till twelve at night—is sufficient for the support of the youngest infant, and as much as any mother can bear with safety. Six hours of uninterrupted sleep are necessary for every mother, who ought to retire to rest early, at nine or ten o'clock; and, after a short nap, have the infant brought to her at twelve, and not again till six in the morning. Nor is the mother more benefited by this respite of six hours than is the baby, whose stomach is thereby refreshed and prepared for its duty during the following day.

The absurd custom of allowing the infant to suck every time it cries, or stopping its mouth with the bosom to pacify it, is always pernicious to both mother and child.

A child that is fed every three hours cannot cry from hunger. It must cry from some other cause, which should be inquired after that it may be removed; and it will generally be found to be the pricking of a pin or an uncomfortable fold in its under garment, a wet napkin, flatulence, or constipation of its bowels, produced by indigestion from having gulped too much at its last meal.

When a child cries much it should be undressed, and if no cause of discomfort is discovered, the stomach or bowels must be suffering from indigestion, which may be relieved by gentle friction with the open hand over its abdomen, and afterwards by carrying it out into the open air for exercise.

Children of good constitutions, if suckled at regular periods as above, usually sleep the entire time during the intervals for the first

six weeks, and require only attention to their napkins to keep them perfectly quiet.

The ancient custom of rocking the infant in a cradle, evidently of barbarous origin, is perfectly unnecessary. Infants, like adults, acquire bad habits easily, and if indulged by being rocked to sleep for a few times, the child will soon look for it, as being requisite for its repose. And although I do not coincide in opinion with those who consider that rocking in a cradle produces congestion of the brain, yet I cannot recommend it as being either useful or necessary. On the contrary, I consider it a bad habit, well dispensed with, and one which I would dissuade mothers from adopting.

A cot placed on rollers, so as to be easily removed from one part of the room to another, as may be most suitable for the infant, and with sides of wicker work or open bars, sufficiently elevated to prevent the infant falling out, is the best place for the child to rest in.

The idea that infants require to sleep in the bosom of their mother, or of a nurse, to ensure sufficient warmth to maintain vital action, is quite erroneous. Every animal that can breathe and support a separate existence can produce for itself sufficient heat, provided it be not wasted by being carried off too hastily by some surrounding cold substance, or by a current of air passing over it.

A sufficient quantity of flannel to retain the heat that is generated is all that is necessary; while the number of children that have been suffocated by being overlaid should be sufficient to cause mothers to accustom their infants to sleep alone; and it is greatly preferable that their cot should be in another room, lest instinct should make them cry to get to the bosom. Besides, while the mother is suffering from milk fever, or, perhaps, from weed, she should not be annoyed with the care of the infant; nor is it advantageous for the infant to breathe the exhalations from her skin while the constitution is throwing off the disease.

A canopy to the child's cot is not objectionable, but curtains drawn closely around are not admissible, as they prevent proper ventilation; and pure air is an indispensable requisite for the growth, comfort, and health of infants. Of the importance of this it is difficult to persuade nurses, who generally err by keeping their rooms too close; or if they do attempt to ventilate sufficiently, they seldom reflect that the tender infant cannot bear to be placed in a current of air, and requires to be moved to a sheltered corner.

REASONS WHY SOME MOTHERS SHOULD NOT SUCKLE.

Having stated, as a general rule, that mothers should suckle their own offspring, it is necessary also to advert to the exceptions to this rule, as there may be insuperable reasons why mothers should not attempt to suckle.

If the mother shows any tendency to phthisis (consumption), even in the incipient stage, she should not suckle her baby, because the drain on her constitution would be injurious to her health, and precipitate the fatal tendency of the disease; while the nourishment she would impart to the infant would increase the hereditary bias in its constitution, and make it more prone to become consumptive.

Secondly, if the mother has suffered from hip disease, or scrofulous affection of the joints, she should not suckle; as her milk would increase a similar tendency in the constitution of the child.

Thirdly, if the mother has an hereditary tendency to insanity, she should not suckle, as the nourishment derived from her would be calculated to perpetuate the hereditary taint in her offspring.

Fourthly, if the mother be subject to epileptic fits she should not attempt to suckle, lest during an attack she might destroy her infant.

Fifthly, if the mother's nipples are depressed and not sufficiently developed so that the child could take hold of them to get milk from the bosom, she should not attempt to suckle.

Sixthly, if the mother be a dyspeptic of the nervous temperament, whose constitution does not enable her to assimilate a sufficient quantity of nourishment to support two human beings, or whose food being badly digested produces breast milk that disagrees with the infant, there is sufficient reason why she should not suckle, and why she should sacrifice every parental feeling for the benefit of her own health and that of her offspring.

THE CHOICE OF A NURSE.

The mother being incapacitated for performing this delightful duty towards her infant, it becomes necessary to think of a substitute, and the qualifications requisite to constitute a good one. Now her capability to nourish a baby should be the first consideration in this enquiry.

A good nurse's breasts should be oblong, firm, and glandular, not flaccid, nor covered with too much fat. Her nipples should be pro-

minent, but not too thick; her milk should flow freely on pressure, and when milked into a wineglass should appear thin, and of a bluish tinge of colour, both breasts being equally applicable, so that the child may not be constantly nursed or carried on the one arm.

If the applicant gives evidence of such fitness for the office of nurse, we should next consider her appearance, temperament, constitution, and moral character.

A bright expressive eye and a pleasing good countenance are very valuable features in a nurse, and their influence on her charge is soon noticed in the joyous smile and happy look of the infant, which is early encouraged or repelled, and thus impressed by the appearance of its attendant.

The best age for a nurse is from twenty-five to thirty years, and if she has had experience by having nursed before, it should be a recommendation. Some say that the nurse should be about the same age as the mother, but this in many instances might be very objectionable, for if the mother has passed the meridian of life a young and vigorous nurse would be more eligible. But the age of the nurse's suck should be as near as possible to that of the mother's, because the quality of breast milk changes very materially at different periods of lactation.

Persons of the sanguineous, impulsive temperament should not be selected as nurses; hence females having red hair or very black are not the most eligible. The mild and easy disposition, indicated by lighter coloured hair and a fair complexion, are greatly preferable, because the influence of the mind on the digestive organs is very remarkable, and a fretful, discontented temper is certain to produce acid, irritating suck that must disagree with the infant. And it is not desirable that nurses should menstruate while suckling, as this also influences their breast milk, and if occurring frequently renders them ineligible. But the influence of the mind is still greater, as there are many cases on record in which a violent burst of passion affected the nurse's breast milk so much that the infant suckled by her shortly afterwards was soon taken with fatal convulsive fits.

As to the constitution of the nurse, she must be free from any of the impediments which we have enumerated as disqualifying the mother, and she must be in the present possession of good health.

The moral character of a nurse cannot be too closely scrutinised. Children are imitative creatures, and at an early age are capable of being influenced for good and equally for evil. The want of truthfulness in a nurse has a baneful influence on a child, which soon

notices every caprice and subterfuge ; and the habit of taking opium or ardent spirits is intolerable, because the breast milk being tainted by these may influence the after life of the foster-child. It is said that Nero imbibed the habits of intoxication from his nurse, and that the cruel, bloodthirsty disposition of Caligula was fostered by his nurse putting blood on her nipple to induce him to suck.

In addition to the moral injury done to children by improper nurses, we know that serious physical injury may be inflicted, and that the most loathsome of diseases—the venereal—may be communicated to infants by immoral nurses. Hence the necessity for mothers to be attentive to the conduct and management of those they employ as nurses.

DIET SUITABLE FOR MOTHERS OR NURSES.

It is a great error to imagine that stimulating food and drink are necessary to produce a good supply of breast milk. It is the nutritive portion and not the stimulating quality of the food and fluids that performs this good office, and the milder and less stimulating the diet may be, provided it is nutritious, the supply of breast milk will be the more nourishing and abundant.

As we stated in the article on dyspepsia, the same kind of food does not suit equally every individual, and in prescribing a dietary for any mother or nurse, we should consider well the natural constitution and previous habits, and endeavour to learn the articles of food in common use which her stomach can assimilate most easily.

Black tea, with plenty of milk, egg, if relished, and good bread and butter for breakfast ; light animal food, as white fish, fowl, and beef or mutton, either roast or boiled, with soup or broth without vegetables, and a mealy potato and stale bread for dinner ; tea and bread and butter in the evening, with a little gruel, or arrowroot, or maizena boiled in water and eaten with milk, for supper, suit those that are suckling. Milk is too heavy as a drink, but rennet whey, or if not convenient, two milk whey is a suitable diluent ; but wine, ale, and porter are unnecessary, and injure the baby.

Vegetables do well with some and disagree with others ; but whatever sits light on the stomach and is easily digested may be taken with safety ; anything that causes acidity of stomach and flatulence to the nurse, will be certain to injure the baby.

Experience proves that the less change is made from the former habits of the nurse the child will fare the better. A peasant ac-

customed formerly to the free air of a country district and to live chiefly on milk and vegetable diet, if removed to town, confined to a close nursery, and fed on rich animal food with ale or porter, will soon suffer in health, lose her milk, and starve the child she is thus pampered to nourish.

On the contrary, a lady accustomed to live on small quantities of nutritive food, if persuaded by an uneducated nurse to swallow last thing at night a bowl of thick gruel, with a quantity of butter in it, may have her stomach and bowels so much deranged that food, suitable for her, cannot be properly digested for days afterwards.

To overtax the stomach is always certain to defeat the object for which it is done, and the most successful means of procuring plenty of breast milk is by using such food as the individual can digest most easily, being careful never to overload the stomach, but to allow the natural appetite to be the sole guide as to the quantity and frequency in both eating and drinking.

REARING INFANTS BY ARTIFICIAL FOOD.

To me it seems a most perplexing question when medical practitioners are asked to decide whether or not the infant should be reared by artificial food, or, as it is termed, "brought up by hand."

We know that breast milk, the delicious repast provided for the infant by the Almighty, surpasses every other form of nourishment, and that although we could command all of Earth's productions, we cannot furnish a beverage equal to this vital fluid, as it bursts from the living bosom of the mother or nurse.

But if the mother cannot or will not suckle her infant, we have to consider the danger of entrusting to a hireling nurse a charge, which is too often sufficient to exhaust the energy and absorb the care and attention of the fondest parent—a duty which taxes to the utmost even a mother's love for her offspring. And in addition to this we have other difficulties to reflect on.

We know that children have been dosed with opiates almost to a fatal issue, to enable a selfish nurse to visit her own baby at a distance, or perhaps to enjoy a little gossip, or possibly to keep an assignation with her paramour.

We have seen the bondage in which parents have been held by nurses, who, knowing the difficulty of supplying their place immediately, and the undesirableness of changing a nurse, have kept a

whole household uncomfortable by their unreasonable exactions, and by constant threats to leave, their services being retained only by frequent unmerited concessions and exorbitant premiums. Nor have these means always succeeded, for as avarice grows by indulgence, their demands have often become so rapacious that they could not be gratified, and the same baby has been kept by three or four different nurses in succession, while its health was more or less injured by every change.

Medical practitioners know likewise the social evils that result from employing married women as nurses. Their husbands, in their absence, are tempted to go abroad for society, and generally spend their evenings in the gin shop or in places of ill fame; while their infants left in charge of women, who are otherwise busied, are neglected and seldom arrive at mature age.

After long experience and due consideration of all the circumstances, if the infant is endowed with a good constitution, I would prefer artificial feeding to the risk of employing a nurse: and with the modern improvements in the method of feeding children there is reason to expect that the result would be equally favourable. Some of the finest specimens of humanity that one could wish to see were children where the whole family were brought up by hand, their mother having badly-developed nipples, which rendered her incapable of undertaking a duty she was most anxious to perform.

ARTIFICIAL FOOD FOR CHILDREN.

As milk is the food provided by the Almighty for the young of all the mammalia, it is evident that we should look to the milk of some of the lower animals as the proper nourishment for the young infant when the mother cannot suckle, and as the milk of domesticated animals varies considerably, it is an object of importance to select that which approaches nearest to the composition of human milk.

By the analysis of Messrs. Parmentier and Vauquelin, we learn that one hundred pounds of milk will produce in—

	Cream.	Butter.	Cheese.	Sugar.
the cow	$4\frac{1}{10}$	$2\frac{1}{10}$	$8\frac{1}{10}$	$3\frac{2}{10}$
in woman . . .	$8\frac{1}{10}$	3	$2\frac{1}{10}$	$7\frac{2}{10}$
in the goat . . .	$7\frac{1}{10}$	$4\frac{2}{10}$	$9\frac{1}{10}$	$4\frac{3}{10}$
in the ass . . .	$2\frac{1}{10}$	0	$3\frac{1}{10}$	$4\frac{2}{10}$
in the ewe . . .	$11\frac{2}{10}$	$5\frac{1}{10}$	$15\frac{2}{10}$	$4\frac{3}{10}$
in the mare . . .	$1\frac{3}{10}$	0	$1\frac{3}{10}$	$9\frac{1}{10}$

It is true that other chemists by their analysis have not arrived at the same results, but the above is commonly received as being sufficiently accurate to guide us in our choice.

According to this analysis, mare's milk having the smallest quantity of cheese, little cream, no butter, and the most sugar, would be best suited for the infant during the first six weeks, and next to mare's milk that of the ass is the most eligible.

The milk of the cow contains too much cheesy matter, that of the goat still more; while the quantity of cheese in the ewe's milk renders it quite unsuitable for young children.

As mare's milk can seldom be got, and ass's milk is also difficult to procure, we are generally obliged to take cow's milk, or goat's milk, and when this is unadulterated, the animal being naturally fed, it does very well, if it is diluted with two-thirds of warm water for the young infant, and sweetened with a little lump sugar. But mare's milk may be given undiluted, and the ass's, with an equal quantity of warm water, about blood heat.

The great error generally committed in feeding children is by giving them too much. During the three first days, a teaspoonful every hour or two hours is quite sufficient; and then a tablespoonful every two hours for the first fortnight, and when a tablespoonful is given it should be by Maw's patent bottle.

After the first fortnight the quantity may be increased a little if the child seems to relish it, but it should never be urged to take more after it declines feeding. A little eaten with appetite, and consequently well digested, is better than a large quantity, which, becoming acid in the stomach, punishes the child with colic, and causes slimy unhealthy stools, terminating too often in diarrhoea, dysentery, and death.

After the fourth week most children will be able to digest a wine-glassful of milk and water every three hours, and at the expiration of six weeks the quantity of water may be reduced gradually up to the third month, when, if the child is robust, it may be allowed pure milk, but for delicate children the milk should continue to be diluted for three months longer.

In feeding children, cleanliness is very important, nor can success be obtained without it. Any portion of food left by the child in the bottle should be removed immediately, and the bottle immersed in fresh water, until it is required again, lest the food should be rendered acid, and consequently unsuitable for the infant.

But the great cause of failure in rearing children by artificial

feeding is the erroneous idea entertained by many nurses and mothers that fluids alone are not sufficient to nourish a child, and consequently they add rusks, tops and bottoms, or biscuits to the milk. By this method they impose a load on the child's stomach which it cannot bear, render the digestion imperfect, induce a diseased action of the stomach and bowels, and deprive themselves of the object they wished to obtain—the growth and improvement of the child.

In milk we have all the constituents necessary to form the different parts of the human frame, and no addition is required, nor should be attempted, until the child has got its first set of teeth. Some of the healthiest and best nourished children that I ever saw had nothing but milk for the first two years of their existence.

IMPROPER FOOD AND MEDICINE GIVEN TO CHILDREN BY NURSES.

We stated formerly that infants, when over-fed, are always afflicted with either vomiting or colic; and it is a lamentable fact that the cause of this is almost certain to be misapprehended by uneducated nurses.

When the infant rejects part of its milk from having taken too much, as its mother may be secreting sufficient breast milk to support two babies for the first three months, the nurse says that the "poor woman is weakly, and her milk windy," and that the "wind must be conquered." And for this purpose a large cup of panado, or gruel, is prepared and forced down the throat of the infant, which, after a time, rejects the dose, to be repeated soon by the persevering nurse, who is fully determined to conquer the wind in the child's stomach.

If the child cries from colic caused by similar overfeeding, the nurse fancies that the mother's milk is too thin and "windy," and she applies her usual dose of panado or gruel, thus adding fuel to the flame, and augmenting the torture of the poor innocent, which is already suffering from repletion.

Having failed to improve the state of the infant by adding to the cause of its suffering, the nurse then commences to drug her charge, and dill-water, mint-water, Godfrey's Cordial, Dalby's Carminative, gin, brandy, or other spirit, syrup of poppies, or perhaps laudanum, are resorted to. Now, the two first of these are the least injurious, but they are better omitted. They can only stimulate the stomach

and bowels to contract and expel flatulence, which is better done by rubbing the child's stomach with the open hand. All the others are very dangerous, as all such stimulants and opiates cause determination to the brain, which in infancy is always injurious, and too often proves fatal.

But the intelligent mother or nurse soon learns to distinguish between the natural call for food and the cry produced by suffering, either from indigestion, colic, or other cause ; and immediately proceeds to ascertain the source of the child's annoyance, and to remove it.

If she is suckling, and finds that she secretes too much milk, as many mothers do for the first three months, she will waste the milk of one breast, alternately, and lessen the quantity of food taken by herself, especially of fluids, until she finds that the baby can digest the portion of milk produced for it. And if the infant is fed artificially, she will reduce the allowance in its bottle to suit its digestion.

When this reasonable plan is adopted carminatives and anodynes are unnecessary, and the baby seldom requires other medicine, as the bowels generally act naturally when the food is of the proper kind, and given at regular periods in suitable quantities.

Some mothers, on the contrary, cannot produce sufficient breast milk to nourish an infant after the first six weeks, and to such aid must be given by feeding the child from the bottle, twice in twenty-four hours, with equal parts of cow's milk, warm water, and a little sugar, without any other addition.

The mother having suckled the baby at six o'clock in the morning, at nine the child should be fed from the bottle, and not suckled again till twelve, then fed again from the bottle at three, and not suckled till six in the evening ; thus giving the mother a rest of six hours twice in the day, which is generally sufficient relief ; but, if necessary, a third feeding from the bottle may be given at nine o'clock, affording the mother a rest of six hours at four periods in the twenty-four.

This method is incalculably preferable to allowing the mother to suckle every three hours, and feeding the baby in the intervals ; because the mother is exhausted by the frequency, and the child's stomach is injured by getting more than the regular meals, and also by having the process of digestion interrupted. And this plan is greatly preferable to dosing the mother with wine, ale, and porter, which injure her constitution, and make the breast milk unsuitable for the infant.

After the third month, it is desirable to lessen the frequency in feeding the infant, either by the breast or the bottle, every four hours being frequent enough during the day, and eight hours at night; the periods for feeding being six, ten, A.M., and two, six, and ten, P.M.,—five times in the twenty-four hours.

The custom of feeding children too often, and giving them pieces, produces a form of dyspepsia very troublesome in after life. Many persons, both male and female, having acquired this habit, must eat something every three hours: or, if not, they get sick and faint. This, to the man of business, the lawyer in court, or the soldier in battle is a serious evil, and shows the impropriety of giving pieces to children during the day, and still worse at night.

But the greater number of mothers can suckle their babies well for the first six months; and while the mother has breast milk enough, and enjoys good health, it is exceedingly wrong to injure the child's stomach with artificial feeding of any kind.

THRUSH.

This disease is invariably the result of improper feeding. We meet with it chiefly in childhood, but we see it occasionally in adults suffering from fever of a low type, in which it is generally ominous of a fatal issue.

Thrush commences with white spots of a curdy appearance on the tongue and soft palate, and it was formerly considered a coating produced by indigestion; but it is now ascertained to be a vegetable parasite, somewhat similar to that which causes diphtheria, while it is less virulent.

When the mucous membrane of the throat becomes inflamed by gross feeding in childhood, or by indigestion in fever, it forms a suitable soil for this parasite, the seeds of which being carried by the air and implanted on such a hotbed, the parasite fungus soon multiplies and spreads to the throat, the stomach, the bowels, and even to the fundament.

Like other parasites, it injures the entire system and the health of the infant, and, if neglected, may destroy life. But as the mineral acids and their salts are pernicious to vegetable growths, we can control this disease.

Treatment.—A saturated solution (as much as water can dissolve) of borax should be applied to the white spots every six hours, or a

similar solution of Epsom salts as often. The latter is more powerful, but the former is the most palatable, being sweet.

The child's stomach and bowels must be attended to; for, while the mucous membrane remains inflamed, the crop that is killed and removed to-day, will be replaced by a fresh growth to-morrow. The infant's food must, therefore, be given in such quantity only as it can digest, and at regular hours; or, if the food is found to disagree, it should be changed. And to improve the inflamed state of the mucous membrane, five grains of the chlorate of potash should be given to the child in a little sugar and water, every six hours after the lotion is applied to the throat.

If the bowels are costive, one grain of aloes should be well mixed with twenty grains of Epsom salts, and one-fourth given in a little syrup every night, until the bowels act naturally. But if diarrhoea annoys, it should be restrained by one drachm of precipitated chalk, mixed in two tablespoonfuls of water, of which a teaspoonful should be given every night and morning till lax abates; or more frequently if it be found necessary.

A SUBSTITUTE FOR MILK.

If the milk of the mare, ass, cow, or goat cannot be obtained, or if the child cannot digest milk, as such cases do occur, some of the farinaceous substances must be substituted for it. Arrowroot and sago are familiar and generally used; but, as they consist chiefly of starch, ground rice, maizena, flour, or oaten meal, with an equal quantity of rye or barley meal, generally suits better. Flour or oaten meal, used alone, is apt to constipate the bowels; but the rye or barley acts as an aperient, and corrects that bias.

When farinaceous feeding is adopted, it should be well boiled in water, seasoned moderately with salt, and made sufficiently thin to be sucked from the bottle; especial care being taken not to overload the child's stomach, and to feed it at regular periods only.

Hard's Food—which, according to the analysis given in the "Lancet" some years ago, consists of well-baked flour—is a favourite with many, and can be used occasionally. And Denham's Farinaceous Food, consisting of three parts of wheaten flour and one part of barley meal, is very suitable to children, as the barley prevents costiveness. Also corn flour, or the preparation called maizena, does very well for children, occasionally.

Slight changes from one to another of the above articles are gene-

rally relished, and useful ; but children early show a preference of taste for some of the articles enumerated, while they reject others ; nor should they be obliged to take what their stomach nauseates, and they continue to dislike.

But the idea that the fancies of children should always be indulged, and that the stomach will digest whatever the child likes, is not supported by reason nor experience. On the contrary, the hopes of many a fond parent have been blighted by the folly of a thoughtless nurse, in giving to a child some indigestible food because it craved for it. To change from one article of farinaceous food to another, and to give most frequently that which the child relishes most, is all that is admissible.

The food that is fit and proper for the nurse, is no more suitable for the child, than a burden that could be borne by her shoulders could be safely placed on those of the infant. Nurses, therefore, should never be allowed to eat in the presence of children, lest they be tempted to injure them by a mistaken indulgence, or spoil their temper by causing them to long for food with which they cannot be gratified.

Experience has established the fact that children can be well nourished by farinaceous food only. Some splendid children have had only arrowroot, rice, and maizena, for the first two years ; nor did their constitutions indicate any want.

But some mothers and nurses, anxious to have their children robust, must add beef or mutton tea, or chicken broth to the farinaceous food ; a mixture which tempts children to eat too much, causes an inflammatory state of the blood, and is followed by feverish attacks, that require to be controlled by medicine, with which the little innocent is next dosed.

As mercury is known to be a powerful means both for good and evil, it is sure to be used in some form by every novice, whether quack or nurse ; and grey powder, a very objectionable preparation of mercury, is in frequent use with those who adopt this system of mixed feeding. It is true that children are not often killed by this mistaken plan of managing them. Many who are overfed and dosed with grey powder frequently continue to thrive, and look well during infancy, unless they be seized with croup, whooping cough, measles, or scarlatina, under any of which their chance of recovery is decidedly less than that of children simply fed, and not dosed with mercury.

In childhood mercury does not salivate, nor does it generally show any other of its evil effects on the constitution ; but in youth its

influence on the bony system is seen by the teeth of children who have been dosed with grey powder. Hot climates show this effect most, and in Australia you discover, by the state of the children's teeth, all the families where grey powder in the nursery was a family medicine. With such children, the first set of teeth is decayed and gone before the sixth year, and the second set is partially lost before the youth or maiden is fifteen. Calomel is a milder preparation; and, when given with an aperient to unload the biliary system and the bowels at the commencement of feverish attacks, it is serviceable; but grey powder being much more apt to disagree with the stomach, should be banished from every nursery.

FEEDING CHILDREN THAT ARE SUCKLED.

As no nourishment for the infant can equal breastmilk, if the mother or nurse has a sufficient quantity of it, to feed the child cannot be beneficial, but the opposite. Most mothers or nurses secrete enough to nourish a child for nine, and some for twelve months; but with some the flow of milk begins to diminish about the sixth month, and it then becomes necessary to assist by artificial feeding.

In selecting our aid, we must be guided by the same rule in this instance as for children brought up by hand. Cow's or goat's milk given by the bottle, with syphon or tube, should be preferred to feeding of any other kind, unless the child shows a peculiar idiosyncrasy of stomach, causing milk of any kind to become acid and be badly digested, while farinaceous food will sit light on the stomach, and be well assimilated; and, in such a case, some of the farinaceous substances enumerated in the foregoing article must be adopted in preference to milk.

But some mothers, who have abundance of breastmilk, fancy that it is necessary about the sixth month to begin to feed the baby, to accustom it to take artificial food, and prepare it for weaning. This theory, although specious, and, at first sight, reasonable, is not supported by experience. Any child that has been suckled by an intelligent mother or nurse, and put to the bosom at regular periods only, but not allowed to sleep upon it, or to have it as a toy to please its fancies, or prevent its peevishness, can be easily weaned; and some children suckled for twelve months have taken artificial food with perfect relish after the departure of the nurse, by whose hand it should never be given in the first instance, as it is doubly galling to be refused by those from whom we have formerly received favours.

Should the child show reluctance to take artificial food when it is necessary, the difficulty is easily got over by allowing it to be hungry, feeding it in the morning before it has got the breast ; and, if eight hours during the night be not sufficient to give it a relish, the trial should be deferred for four hours longer ; and, if necessary, for another period of four hours, which, in my experience, has never failed to succeed. The breast must, however, be withheld meanwhile ; nor does fasting for this length of time injure the baby, provided care be taken not to give it too much at the two next meals. The great point to be attended to in feeding children while at the breast, is not to interfere with their regular periods for feeding, and not to allow them to have both the bottle and the breast within one period, and to feed only at such periods as are necessary to rest the mother or nurse once, twice, or at most three times, in the twenty-four hours.

In feeding children, after the third month, regular periods should be rigorously attended to, allowing four hours between meals during the day, and eight hours at night, which rests are absolutely necessary to recruit the energies of the stomach, and maintain a healthy action. If a child fed regularly at such periods cries, it cannot be from hunger, and the cause ought to be sought for ; and it is certain to be found to be acidity of stomach from repletion, or flatulence, or constipation of the bowels, or injury by exposure to too much heat or cold, or peevishness from irritability of temper.

To attempt to relieve suffering from any of these causes, by giving more food, would only increase the evil. If acidity of stomach or costiveness prevails, a little magnesia will be serviceable. If the child has been exposed to the heat of the sun, ice or cold cloths to the head are indicated ; and if the child has been chilled, a warm bath at 98° Fahr. will relieve it ; but if it cries from peevishness, it should be amused with a toy, dandled by the nurse, or carried into the open air for exercise.

The ancient plan of feeding children from a boat or with a spoon, is very objectionable, because the child swallows too hastily, and the stomach does not get time to contract or express any feeling of disapprobation, until it is overloaded ; and fond mothers and ignorant nurses, forgetful of the sensitiveness and delicacy of the infant stomach, and actuated only by a wish to see the child grow big and fat, often urge the child to swallow more, when it is overfed.

We could instance numerous cases in which, when called to treat children for diarrhoea and dysentery, the reply to our inquiry respect-

ing the child's appetite was given, by showing the size of a bowl of panado or gruel, sufficient to breakfast any adult, which the sick child had swallowed that morning.

The child being placed on its back in the nurse's lap, was obliged to swallow spoonful after spoonful, or else be suffocated. Now every child should be fed when sitting up, to save it from the double risk of being suffocated or poisoned, by swallowing too much.

The temperature of a child's food is also important, and should never be above 98° Fahr., nor below 96°. If hotter than this, it irritates and injures the stomach ; and, if colder, it retards digestion, because the gastric juice does not act till the food is heated to 98° in the stomach ; and, if the child is delicate, the food will become acid before it can be digested. To correct either extreme of heat or cold, nurses are in the habit of putting the morsel first into their own mouth, and then into the child's, which, to say the least, is disgusting, as well as being otherwise reprehensible.

The modern plan of feeding children from a bottle, with a syphon or tube, has many advantages, because the food must be in a fluid state, which is best suited to the infant's stomach, because it must be taken gradually and slowly, giving the child's stomach time to contract before it is too much distended, and because the child, by the act of sucking, compresses the glands about the throat, and causes a flowing of the saliva, which is a powerful aid to the gastric juice in digesting our food.

The bottle is decidedly the best method of feeding children until their first set of teeth are complete, say two years. It is true some argue that we should be guided in feeding it by the state of the child's teeth, and that as soon as the molar or grinding teeth are through, the child should have some solid farinaceous food, and animal food as soon as the canine, or eye teeth, are produced.

We admit that the teeth are a true index to the kind of food most congenial to every animal, and that the presence of the molar teeth, peculiar to herbivorous animals, and also of the canine teeth, common to the tiger and other beasts of prey, indicate, in the human race, a capability for a variety of food, as soon as the powers of the stomach are sufficiently matured, and the exercise of the body requires a more stimulating regimen.

We know, however, that the kind of food has great influence on the temper and passions of all animals. The tiger when confined to farinaceous food becomes mild and tractable, while the cow or horse, if fed on animal food, becomes dangerously savage ; and

animal food makes the domesticated pig as liable to attack man, as is the wild boar in the forest.

While we admit, therefore, the plausibility of this theory of feeding children, which is founded on the formation of the teeth, we hold that experience is a still better guide, and that mothers and nurses who have the charge of children should exercise their reason, and not be hasty in giving those kinds of food which irritate the temper, and excite the evil passions of the youthful mind, especially in childhood.

Milk alone is sufficient nourishment for any child during the first two years, and farinaceous food, by changing occasionally from one kind to another, does equally well; nor have we ever known any person have cause to regret the withholding of animal food till after the second year, while we are aware that the health and temper of many children have been injured by getting animal food too early in life, and too frequently afterwards.

We object, therefore, to giving beef- or mutton-tea or chicken broth, either alone or combined with farinaceous food, before the child has completed its first set of teeth. This mixed feeding renders the blood more inflammatory, increases the irritability of the constitution, and augments the sufferings of the child during the process of teething. Children fed on milk or farinaceous food only, if fed at regular periods, enjoy better health, require less medicine, are more easily managed, being less irritable in temper, and always get their teeth more favourably than those that have been overfed by foolish mothers or ignorant nurses.

TEETHING, AN IMPORTANT PERIOD.

Teeth being necessary to enable us to masticate our food, the proper division of which tends much to facilitate digestion, although they rarely appear in the human race at the time of birth, yet the Almighty Creator has provided them, and they are already being formed and progressing.

In the lower animals, which are early required to eat solid food, teeth are as early matured; and the fact that the first set of teeth with mankind are seldom complete before the end of the second year of our existence, seems convincing evidence that during that period our food should be milk or some equally mild fluid.

At birth our teeth are found in a pulpy, incipient stage of formation in the cavity of each jaw, and as this bone increases in size with the growth of the body, the primary set of teeth suited for the

jaws of a child would be too small to fill the jaws of the full-grown man. Hence two sets are provided, the one lying above the other in the cavity of the jawbones, the first set being deciduous, and dropping out about the seventh year, to be succeeded by the upper or second set, suited to fill the enlarged jaw.

The fangs or roots of the incipient teeth are hollow to admit the passage of bloodvessels and nerves into the body of the tooth, to nourish it, while the pulpy substance is being consolidated into bone ; but the enamel that finally protects the body and crown of the teeth is not yet formed. It seems to be reserved as the last part of the process preparatory to the tooth emerging from its bony case.

The first set of teeth consists of four incisors, two canine or eye-teeth, and four molar or grinding teeth in each jaw, making twenty in all, which approach generally in the following order. The two front incisors of the lower jaw appear first, and after these, in a few weeks, the two front incisors of the upper jaw approach ; then the two outside incisors of the under jaw appear, followed in a short time by the lateral incisors of the upper jaw. After a lapse of some months the two anterior molar or grinding teeth of the lower jaw protrude, and are soon followed by the two anterior molars of the upper jaw. These are succeeded by the two canine or eye-teeth of the lower jaw, and afterwards of the upper jaw ; the two posterior molars of the under, and those of the upper jaw being last in appearing.

In some children this order is reversed, the teeth in the upper jaw appearing before those of the under jaw ; but this is not the general rule.

Some children are born with the two front incisors, either under or upper, perfectly formed and prominent, and nurses attach great importance to this, as being ominous of some characteristic feature or virtue in the coming man ; but all that I have known it to forebode was much annoyance to the mother or nurse by having her nipples bitten or injured by these teeth before the child became subject to control.

That teething is a critical period in childhood is proverbial, and is attributable to the great preponderance of the nervous system over the muscular and bony portions at this period of life, and the immediate sympathy between the nerves of the teeth and the brain, and through it, with every other part during childhood. Hence the tendency to inflammation of the stomach and bowels, the larynx and lungs, and the proneness to epileptic fits during the process of teething.

The membrane that lines the cavity of each tooth is exceedingly sensitive, and the investing membrane, or periosteum, is equally so ; and it is the pressure on the inner membrane, and the distension and piercing of the outer membrane that cause so much suffering to the infant during the period of dentition.

The pain and difficulty in getting the canine or eye-teeth are familiar to every mother and medical practitioner, which fact is accounted for by the circumstance of their coming after the first molar teeth, and being surrounded by bony, unyielding substances on each side. And in addition to this, their points being sharp, pierce the periosteum gradually for a length of time, while the tops of other teeth being oblong or flat, burst the periosteum sufficiently to allow the teeth to escape at once, without protracted suffering.

In addition to the periosteum, the teeth must pass through the gums, which are also sensitive, and become swollen, red, and painful, producing such heat in the child's mouth that the attentive mother or nurse can always ascertain the approach of a tooth by the heat communicated to her nipple from the inflamed gums.

The same irritation of the gums produces an increased quantity of saliva, causing the child to drool, which Hippocrates, the father of medicine, noticed as a favourable symptom, seldom present in difficult dentition ; because the increased flow of saliva relieves the glands about the neck, and lessens this part of the evil consequences of teething.

Another natural symptom is the child's thrusting its hand into its mouth, not for the purpose of sucking it, but to relieve the pain by pressure.

Diminished appetite, thirst, and feverishness are also premonitory symptoms of teething, by the extent of which we can generally prognosticate the amount of suffering the child is likely to be exposed to, and to decide whether dentition will be accomplished easily or with difficulty.

Treatment.—Strict attention to the state of the stomach and bowels is of the first importance. Even with adults, a corn on the toe, or any other evil, is increased and aggravated by indigestible food or derangement of stomach ; and in the teething of infants we see this sympathy marked in proportion to the sensitiveness and tenderness of the sufferer.

It is at this period that we first experience the great benefit resulting from suitable food, given only at regular periods. Children brought up in such a manner suffer little, while those who have been

fed too often, or with food too heavy or too stimulating, seldom escape a great deal of suffering during the process of dentition. Parents are indeed greatly in error who wish to have their children swollen out with fat, like young prize animals fitted for the cattle-show, as lean children, if healthy, always get the teeth easily, while robust children are more subject to inflammatory attacks and prolonged suffering.

Next to the stomach and bowels the head should be attended to and kept cool, by sponging it frequently with cold water, if the heat be above the natural. And the heat of the mouth, that is one of the premonitory symptoms of teething, is greatly relieved by the application of a bit of damp, cold, sponge, made to the gums as often as may be desired.

The natural tendency which the child has to push its hands into its mouth, indicates the propriety of providing it with something suitable to make pressure on the gums. Some mothers and nurses give the child a crust of bread, which is very objectionable; because parts of it are liable to break off, and passing into the stomach without being masticated, may irritate both the stomach and bowels, or cause, perhaps, unnecessary alarm by partially suffocating the child.

A small piece of very light wood, prepared by the turner, so as to be perfectly smooth, suspended by a ribbon around the child's neck, is free from risk of any kind and the most suitable. Nor should this be looked upon as a toy, although there is no objection to its being also in the form of a rattle, yet it is a very efficient agent in forwarding the process of dentition and lessening suffering meanwhile. For by pressing the gums upon this solid substance, the pain of teething is not only benumbed, but the absorption and thinning of the gums and the investing membrane, or periosteum, is hastened.

When this pressure has been used for a time, and the tooth has advanced so far that its top, or crown, can be touched with the gum lancet, or scarificator, the only effectual and permanent way to alleviate the child's sufferings is to have the gums scarified.

It is difficult, we are aware, to persuade some timid young mothers of the propriety of this operation. They think it cruel, and being ignorant of the anatomy of the parts, they cannot see the advantage accruing from its use; but having experienced the benefit of it in one or two instances, they become easily reconciled to its adoption. The idea that scarifying the gums is a very painful operation is per-

fectly unfounded, as I have had ample proof, because children living in the same street, who have been brought to my house to have some of their teeth scarified, have afterwards come of their own accord to get the last molars scarified, and when they could not speak have pointed to the tooth that pained them.

It is true that the gums have occasionally to be scarified a second or even a third time, because the tooth had not advanced sufficiently to allow the periosteum to be divided, or else the lancet had glided off, separating the gum only. Now some fancy that the scar or cicatrix of the gum healing over the tooth, must make the gum more unyielding, or harden it, as they say, and obstruct or impede the approach of the tooth. But this idea is also unfounded, because cicatrices have less vitality than the surrounding parts, and hence old wounds are always the most liable to yield to pressure or any other exciting cause.

Nor is the division of the gum only without benefit, because its pressure being lessened, the tooth will advance more speedily, and the periosteum yield more readily, upon the familiar principle that one ply is more easily burst than two; and the loss of a little blood resulting from the use of the gum lancet does good, by relieving the distended vessels and abating the swelling of the gums.

The eye teeth, as we noticed above, come after the incisors and the front molar teeth, so that the space they have to pass through is limited and bounded on either side by unyielding bone, which must increase the pressure on the fangs of these teeth, lined as they are by a very sensitive membrane, and supplied with blood-vessels and nerves very susceptible of injury and subject to pain. In addition to this the points of these teeth being small, press on the periosteum in an unfavourable manner, so as to prick it, and make the passage through it tedious by the natural process, and difficult to assist with the gum lancet which glides off the tooth frequently, without dividing the periosteum.

Parents should not therefore object to a repetition of the scarification, especially, of these teeth, as one application of the lancet is seldom sufficient; nor should they consider their children out of danger until the eye-teeth are well through.

The feverishness which accompanies teething is best relieved by tepid baths, at the temperature of 95° Fahr., for ten or fifteen minutes, given every evening, if the skin is hot and dry. Some mothers and nurses are afraid to use tepid baths, lest they should weaken the child; but their action is the opposite, as by opening

the pores and lessening the fever they comfort the child and give it strength. But the usual morning bath for cleanliness cannot be dispensed with, and may be continued either tepid or cold, as the child had been accustomed to ; but while the child is feverish, tepid is preferable.

This feverishness causes constant thirst, which is very distressing to the infant, and difficult to restrain. If it is suckled it craves constantly for the breast, and if it is artificially fed it wishes for the bottle to allay this morbid feeling. But to indulge it in drinking too often is always certain to be ruinous, by injuring the stomach and inducing diarrhoea or dysentery. The thirst should be checked by sponging the gums frequently with a moist, cold sponge, as directed for heat of mouth, and by giving often one teaspoonful of cold water.

In place of indulging children in having the breast or bottle more frequently while teething, they should be restrained and get less food, and that of the mildest kind only, and at regular periods, because the stomach being weakened by the nervous irritability of the system, has its powers diminished, and cannot digest as much as formerly, much less is it equal to any increased duty, and if food be pressed into it, a portion must pass undigested into the bowels, and cause diarrhoea or dysentery. And as diarrhoea under such circumstances may be a natural effort to throw off what was injuring the bowels, and useful also by relieving the blood-vessels and the brain by the increased quantity of fluid carried out of the system, we should not be too hasty in giving astringents to check it, but merely continue the tepid bath to lessen feverishness, and a teaspoonful of cold water, given frequently if thirst prevails.

But while we admit that diarrhoea is often serviceable in this way, we cannot coincide in the opinion that it is a favourable symptom. We always look upon its presence as giving evidence of some error in diet, or injury done by exposing the child to a current of air, or cold by some other means ; still its usefulness as a safety valve is proverbial.

If the diarrhoea becomes severe, so as to be calculated to weaken the child by the frequency of the dejections, it is necessary to give a little chalk mixture to control it. For this purpose a teaspoonful of precipitated chalk should be mixed with four tablespoonfuls of water, and of this mixture the child should get a dessertspoonful every six hours, till lax abates ; after this it should be given less frequently, say once or twice a day, till the bowels act naturally, and

with food of proper kind, given at regular periods. This is generally sufficient.

In extremely severe cases of diarrhoea it is sometimes necessary to give an astringent, and occasionally an opiate, with the chalk mixture. In such cases one drachm (a teaspoonful) of tincture of catechu should be added to the two tablespoonfuls of chalk mixture, as directed above, and a dessertspoonful given, as before, every six hours ; but the effect of opium on infants is so hazardous that we cannot recommend it as a family medicine, to be given internally. It acts most favourably in infancy when applied as a liniment to the spine and over the bowels.

For this purpose one ounce of fluid ammonia (hartshorn), an equal quantity of sweet oil, and two drachms of laudanum, should be mixed together, and of this a teaspoonful should be rubbed on the spine and on the bowels, night and morning till lax abates ; the chalk mixture with the catechu being continued as formerly.

Constipation of the bowels during dentition requires to be carefully attended to and corrected, because it aggravates all the unfavourable symptoms, and often causes determination to the brain, which is indicated by the opening of the head being swollen, and more elevated than usual.

To relieve the bowels of children when teething, one grain of Socotrine aloes, carefully mixed with ten grains of Epsom salts, one half to be given at night and the other in the morning, is a safe and efficient aperient. In the absence of aloes, Epsom salts alone, in ten grain doses, will have the desired effect ; but the aloes unloads the bile duct, and relieves the head more.

We are of opinion that if the unfavourable symptoms mentioned above be attended to by an intelligent mother or nurse ; if the process of teething be relieved and hastened, by providing the child with a piece of round, light, and smooth wood, to press its gums on ; if the heat of mouth and thirst of stomach be removed by sponging the gums often with a cold damp sponge, and by giving frequently a teaspoonful of cold water, in place of allowing the child the bosom or the bottle, to overload the stomach, already too irritable ; if the food be milk only, or farinaceous fluid given in proper quantity at regular periods ; if the gums be sufficiently scarified ; if diarrhoea, when severe, be restrained ; if constipation be guarded against, and the head kept cool by sponging it frequently with cold water, teething, being a natural process and not a disease, is almost certain to terminate favourably. But when these symptoms and circumstances

are not attended to, a train of evil consequences may be calculated on as likely to ensue.

The glands about the neck may inflame and suppurate, leaving a puckered unsightly scar, similar to that caused by the king's evil. These tumours should be early attended to, and if taken in the first stage, while hard, they are easily dispersed by a plaster of iodide of lead ointment, made by one drachm of the iodide to an ounce of rendered suet, spread on calico, and constantly applied to the swelling; but if the glands have been allowed to go on to soften, they cannot then be dispersed, and a poultice of bread and water ought to be applied, to hasten suppuration. And as soon as the skin is sufficiently thinned by the matter pressing towards the surface, the tumour should be opened with a lancet, in a line with the natural fold of the skin, as this prevents the scar from being unsightly.

The gums may ulcerate if they have not been kept cool by sponging, as directed, or if the stomach has been overloaded with food which in its present state it could not digest. Such ulcers soon heal by giving half a grain of aloes, and five grains of Epsom salts, night and morning, or once a day only, in a little syrup, for two or three days; or if this does not succeed, by adding five grains of chlorate of potash, in a little sugar and water, after food, thrice a day.

But a more formidable assailant has often to be contended with, when determination of blood to the larynx causes a deposition of coagulated lymph on its lining membrane, constituting croup; or even spasm of the glottis, simulating croup.

This affection is distinguished by the difficulty in breathing, and by the peculiar shrill crowing cough, which, heard once, is afterwards easily recognised. As soon as this attack is noticed, the child should be put into a warm bath at 98° Fahr., and when in a few minutes the temperature should be raised to 100° Fahr., and the child should be kept in the bath for twenty minutes or half an hour, unless faintness forbids; and the bath should be repeated night and morning, till the symptoms abate. And the child should get one grain of podophylline, carefully mixed with thirty grains of Epsom salts, and divided into six parts, of which one ought to be given in a little syrup, every eight hours, till the croup disappears.

Congestion, or inflammation of the lungs, may also supervene, as a consequence of difficult dentition. And this malady is recognised by cough, by oppressed breathing, requiring the child to be kept nearly in an erect position; and by the amount of suffering pour-

trayed in the infant's countenance, which is either very pale, or of a leaden hue. For this as for croup, the warm bath is a sovereign remedy, which must be repeated every night at least, and followed by the same dose of podophylline and salts, given every eight hours ; while the chest is relieved by a mustard plaster, of equal parts of mustard and flower, moistened with hot water, and put between folds of muslin. This should be applied for ten minutes every twelve hours, so as to keep the skin red, but not to blister.

Convulsions or epileptic fits are alarming symptoms of difficult dentition, which may occur singly or as an accompaniment or consequence of other maladies ; and for these the hot bath is always serviceable ; and after it has been given the gums should be carefully examined, and any teeth that are approaching should be freely scarified. But some parents object to this, lest the irritation should renew the fit. This fear is, however, groundless ; for, if the scarificator be applied in the lull that immediately succeeds the fit, while the child lies in a comatose, insensible state, the result, in my opinion, will always be favourable ; nor have we any other means of preventing a recurrence of the fit so certainly efficacious. The state of the bowels must also be attended to, and even when diarrhoea has been present for some time, a mild aperient, as a dessertspoonful of castor oil, may be necessary to carry off some indigestible food given by a foolish mother or inconsiderate nurse. If the bowels be constipated, half a grain of aloes and five grains of salts should be given in syrup, night and morning, till the bowels act, and then every night or morning until the dejections appear healthy and the bowels act regularly.

Dysentery is, however, a still more fatal sequel of difficult dentition, and the almost invariable result of improper feeding ; nor is it possible to convince some over-fond, misguided mothers or reckless nurses of the necessity of limiting the child's food, and of the trifling error in diet that may produce lamentable results. On the contrary, while the child continues to swallow, which it often does, not from appetite, but from pain of stomach, caused by present repletion, they will persevere in feeding it, in despite of all our reasoning, and in opposition to repeated admonitions. This affection during teething generally follows diarrhoea, and is indicated by a constant griping pain of bowels, causing very frequent slimy or bloody dejections, with great tenesmus, or straining at stool. To alleviate this distressing pain, calomel and opium are usually given ; but with this practice I cannot coincide, as the first is unnecessary,

and the latter is hazardous. If opium be given, it should be only in the form of Dover's powder, of which half a grain may be given every eight hours in a little syrup; but it is best dispensed with. Hydrocyanic acid, which does not injure the brain as opium does, has a more happy effect in controlling the spasms of the bowels, which being invariably ulcerated, in such cases are most benefited by the chlorate of potash. The application of the chlorate of potash for this purpose was first suggested to me by the powerful influence which this medicine possesses in healing ulcers on the mucous membrane of the gums and mouth in the disease called *cancrum oris*; and its good effects in tedious cases of dysentery from teething were scarcely less marked in my practice. Two drachms of the chlorate of potash, dissolved in two ounces of water, with three minims of the hydrocyanic acid of Scheele's strength, and a teaspoonful of this given every eight hours, taking care to shake the mixture before pouring out the dose, always has a good effect; and when accompanied with a warm bath at 98° Fahr. every evening, and friction over the spine and bowels with a teaspoonful of the anodyne liniment, as advised for obstinate diarrhoea—one ounce of fluid ammonia, same quantity of oil, and two drachms of laudanum, is the plan of treatment from which I have seen the greatest benefit derived. But unless the child's feeding can be strictly regulated in such cases, no medicine can have any permanently good effect, and all that art can do is thwarted, so that our best efforts may only alleviate present pain and postpone the fatal issue.

Inflammation of the brain is the most perilous of all the results of difficult dentition, because it occurs generally in scrofulous constitutions; in which this disease so often proves fatal. It commonly follows diarrhoea or dysentery, by which the constitution has been previously wasted, so that it is the less able to bear the attack of another assailant. It is recognised by the heat of head; the elevated state of the anterior opening of the head; the constant restlessness of the child; the dilated pupils; and the tendency which the infant shows to roll the head on the pillow, or the nurse's arm. Leeches applied to the temples, and calomel thrown into the stomach, was formerly, and is still the practice, adopted in cases of this kind. But from this I dissent, because the depressed state of the system, by previous disease, seems to me to forbid depletion by leeching, and the irritation caused by calomel is equally uncalled for. Constant cold applications to the head by pounded ice in a bladder or bag of oiled silk, or by rags squeezed out of cold water frequently replaced

over the head, constitute our best safeguard against the destructive influence of this malady. And when using damp cloths to produce cold, one ply is sufficient, as a number of folds retain the heat, form a poultice, and defeat the object. Together with the cold applications to the head, a small blister should be kept open behind each ear, by Brown's blistering tissue; and the child should have a warm bath every evening, unless weakness be extreme, and if so, the lower limbs only should be immersed in hot water at 98° Fahr. Considerable fever always accompanies inflammation of the brain; and to lessen this, and allay irritability, the child should get a mixture of half an ounce of acetate of ammonia, as much syrup, one ounce of water, and two minims of hydrocyanic acid, Scheele's strength, the dose of which should be a teaspoonful every six hours. If the bowels be confined, or the motions unhealthy or clay-coloured, the child should get one grain of podophylline combined with thirty grains of salts, of which one-sixth part would be the dose, to be given in syrup every night until the motions become natural; and this treatment must be continued until the inflammation is subdued, and a healthy action established.

Many mothers complain of the difficulty of giving medicine to children, who early learn to distinguish by taste, and to resent anything which is unpalatable; and give this reason for preferring calomel, because it has no taste, and is easily administered. But the future evil effects of calomel on the constitution should not be incurred to avoid a little trouble in giving another medicine more calculated to benefit the infant; especially as this difficulty is easily got over by laying the infant on its back on the nurse's lap, then closing its nostrils firmly by two fingers placed on each side of its nose, before the medicine is put into its mouth, and keeping the nostrils well closed till it swallows the dose, which it must do to get breath.

This plan is perfectly safe, because if the nostrils are kept closed the child cannot suffocate itself, and it must soon swallow the medicine, as it cannot long bear the want of breath. It is also the kindest method that can be adopted, and greatly better than spoiling the child's temper by vain attempts to persuade it, or increasing feverishness by allowing the child to make efforts to resist.

If mothers will not take this trouble, and must dose their children with mercury, calomel is greatly preferable to grey powder; and one grain is a sufficient dose for a child while teething. It should be

given at night in a little sugar, to be followed by a little senna tea next morning, to carry it out of the bowels.

As the air we breathe has great influence on the health of all, good ventilation and an elevated locality are very important when children are teething. In cases of difficult dentition change of air has an astonishing effect in alleviating the suffering, and in bad cases should if possible be adopted.

WEANING THE INFANT.

The term "weaning-brash" is familiar, and sounds so harshly on the ear of every mother, as to cause her to look forward to the event of weaning her baby as a critical period, and if it becomes necessary to separate the infant before the expected time, by reason of impaired health or other circumstances, most mothers submit with repugnance. The parent who has considered this delightful duty the joy of her life can seldom be persuaded to "break a bond so sweet," and relinquish her pleasing task without reluctance or deeply felt sorrow; still it must be done.

It is impossible to fix any stated period for weaning babies, because the difference of constitution of both parents and children, together with other circumstances, must often necessitate a deviation from any general rule.

Nine months are long enough, on the average, for women to suckle, especially in hot climates; but some can suckle without injury for twelve months, which should be the limit; while others cannot suckle more than three, four, five, or at most six months, without suffering from depression of spirits and debility.

If the mother or nurse has a good appetite, enjoys good spirits, and has other indications of perfect health, there is no necessity for haste on her part to wean the baby; but, on the contrary, if she experiences a dragging sensation while the child is at the bosom, and a sinking depressed feeling afterwards, together with impaired appetite, dimness of sight, pain of back, restlessness at night, lassitude during the day, or giddiness after stooping, it is highly advisable for her to cease to suckle.

We do not assert that such symptoms render it absolutely necessary for the baby to be weaned; because change of food, better air, and a little tonic medicine—perhaps a little quinine—after breakfast and dinner, may enable the constitution to rally, and continue to suckle for a few months longer. But a respite obtained

in this way is generally brief, and perfect restoration of health is seldom obtained without weaning, and by that means stopping the drain on the constitution.

Unfavourable symptoms, if attended to early, may, however, be combated, and a delicate mother may be enabled to continue to suckle, by a change of food; by a little tonic medicine, and by adopting the plan of partly feeding the baby, as directed above in the article on artificial feeding for infants.

But the child must not be put to the bosom with equal frequency as formerly, else the mother will not benefit by the child being fed, and the infant will be injured by getting too much food. A mother whose health is imperfect should not suckle oftener than thrice a day, giving her a rest of eight hours between each time; and if this seems too much for her, twice in the twenty-four hours should be tried, the child being fed from the bottle and tube with cow's or goat's milk at all other regular periods.

If the mother be seized with any severe fever, it is necessary that the child should be weaned, not because it is likely to suffer from the altered quality of the breast-milk, or to get the fever, which, as we stated in the article on typhus fever, there is little reason to dread; but because the drain on the system of the mother would tax her constitution too heavily, retard her recovery, and imperil her safety. For, to recover perfectly from fever, it is necessary that the constitution be placed under favourable circumstances, and when this is overlooked, or cannot be accomplished, the evil consequences of fever are too often permanent during life.

If a mother has conceived while suckling, it is a sufficient reason why she should wean her baby, because to support one infant is sufficient labour for the constitution to be subjected to, and because the sympathy between the womb and bosoms is so great, that continuing to suckle is highly calculated to provoke a miscarriage.

Inflammation of the bosom, terminating in abscess, if seated near the nipple, must compress or obstruct the milk ducts, and may necessitate the weaning of the child, especially if both bosoms are attacked at the same time, or if one breast has been destroyed formerly by a similar attack.

Nor can we limit the necessity for weaning to the causes already enumerated; for other circumstances may arise to render it unwise on the part of the mother, and unprofitable for her child, to continue to suckle. Owing to some idiosyncrasy in the constitution in the one or the other, the breast-milk may disagree, and the child may

waste and decline, while kept at the bosom, but thrive well afterwards if nourished by cow's or goat's milk; while some children cannot digest milk of any kind, but thrive well if fed with fluid farinaceous food from the bottle. Some children do best when fed with animal food in a fluid state, as beef or mutton tea, chicken broth, the juice of raw meat, or Liebig's essence.

The present state of the child's health must always be considered and taken into account in our arrangements for weaning; and from the amount of suffering that children are subject to while teething, it is certain that the process of difficult dentition should not be selected as the time for weaning. Because if the child is suffering from a deranged state of the stomach and bowels, caused by teething, a change to artificial food might be ruinous; and under such circumstances we can only recommend the substitution of a wet nurse until teething is got over; while care must be taken to choose one whose milk is about the same age as that of the mother's, or as nearly as may be.

Some think it a matter of great importance that the child be weaned piecemeal, and gradually accustomed to the want of the breast, lest it should not take artificial food when necessary. To me there seems no reason to stipulate for such terms. If the child be allowed to be hungry, as directed in the article on artificial feeding, it will not reject the bottle. On the contrary, I have seen children that were suckled constantly for eighteen months, owing to unfavourable symptoms while teething, accept the bottle when first offered to them, and without craving for the breast afterwards.

A little address on such occasions is no doubt necessary; and as a refusal from those who have formerly been liberal to us is never palatable, and as it requires an increased amount of self-denial to abstain from luxuries within our view, the good sense of every intelligent mother will suggest the propriety of having the baby fed for a time apart from her; and not nursing it except after it has been fed. And she should be careful always, at this period, to wear a high-bodied dress, lest the child should be able to touch the bosoms, and by that means cause a longing to return to its former repast.

We would certainly have the child's food prepared under the eye of the mother, for too much care cannot be taken to have it perfectly sweet, of the proper temperature, not less than 96° Fahr., nor more than 98°, and not too gross nor too abundant in quantity; because the state of the stomach for life is now being formed, and it depends

very much on the plan of feeding the child now adopted and afterwards pursued whether the future man or woman will be fitted for the duties and pleasures of this world; or whether he or she shall be a miserable dyspeptic, to whom all the comforts and enjoyments of life without are soured and embittered by the prevalence of acidity of stomach within.

Still we are aware that cases do occur, in which, in despite of all care, no kind of artificial food can be got to agree with some babies; but, on the contrary, their bowels are constantly relaxed, their stools slimy and unnatural, their skin dusky and shrivelled, and their countenances dejected and expressive of constant suffering. Such children can digest nothing but human milk, and the only way to rescue them from misery and a lingering death is to provide a wet nurse, and get them a suitable breast, to which, as by instinct, they return readily, although they may have been weaned for some months previously. Recoveries by this means are often astonishing, and such children, when suckled to the end of their second year, or until their first set of teeth was perfected, have afterwards enjoyed good health.

BAD EFFECTS OF SUCKLING TOO LONG.

Injury from this cause is usually done to the mother rather than the child. If mothers continue to suckle after they have lost their appetite, and feel other symptoms of inability to perform that duty, such as vertigo, dimness of sight, loss of memory, pain of back, constant whites, together with irritability of temper, and sleepless nights; mania resulting from undue lactation, or a tedious nervous fever, may be anticipated in constitutions of an excitable and susceptible character. And in constitutions of the lymphatic or scrofulous type, the system being too much reduced by suckling too long, tubercular deposits are likely to form in the lungs and other organs; and by this means many a valuable life has been lost by phthisis or consumption, sometimes hasty or galloping, and in other instances more tardy in its progress.

Some mothers, who do not wish to have large families, continue to suckle for two years, or even more, to prevent conception taking place; but few can suckle more than nine, or at most twelve months, with impunity. Even robust mothers who exceed this limit seldom escape the forfeit of injured health, and an impaired constitution, liable afterwards to be affected by any exciting cause, such as expo-

sure to cold or atmospheric changes, and ready subjects for influenza or any other prevalent epidemic disease.

A GOOD NURSERY IMPORTANT.

The child being weaned, will, of course, be less with the mother, and more in the nursery, on the suitableness, ventilation, and position of which, must greatly depend its future health and happiness. It is a very mistaken idea which some unreflecting persons entertain, that any garret room, where the noise will be little heard, is good enough for a nursery; the chief consideration with such persons being to keep children secluded, as creatures neither allowed to see nor to be seen. On the contrary, the room set apart for a nursery should have a pleasing prospect, because the spirits and countenances of children, as well as their health, are easily impressed either favourably, or the opposite, by the objects they are frequently looking at. The nursery should also be so situated as to have the advantage of the sunlight and rays during the greater part of the day. In northern latitudes it should front towards the south; and, in southern latitudes, towards the east or north-east, so that children may enjoy the invigorating influence of this great source of heat and life.

Plants kept in a dark cellar, if they grow, remain blanched and sickly looking; and animals, even of the lower order, if similarly situated, do not thrive nor come to perfection; and the same rule is invariable with regard to the human race, who languish, and become diseased, if they be not sufficiently stimulated by the sun's rays.

The ground-floor should never be selected for a nursery, because it is subject to dampness and impure air, which is constantly rising from beneath the floor, while it is well known that malaria, and all noxious vapours, are most prevalent and injurious on the surface of the ground in all marshy districts.

The nursery should be well ventilated, because nothing is so indispensably necessary for the life and health of children, as pure air. Without food we could live many hours; but, without oxygen, to renew the blood, and vital energies, we cannot exist many minutes; and children, who breathe quicker than adults, and form fresh blood rapidly, require a large supply of oxygen. Hence the error in having nurseries too small and overcrowded, and the impropriety of keeping children too much within doors when the weather is favourable, and suited for outdoor exercise or amusement.

The temperature of the nursery should also be attended to. In winter it should be heated to about 65° Fahr., by a grate or open

chimney ; children being protected from fire by an elevated fender or lattice work ; but a current of air should be admitted frequently to give a fresh supply of the great reviver, oxygen, and to prevent the accumulation of carbonic acid given off by the air we exhale from our lungs.

As we stated in the article on nursing, children should always sleep separately on hair mattresses, in cots without curtains, and with enough of covering to retain sufficient warmth, but not to relax the system by too much perspiration. Children in the enjoyment of health generate a great deal of heat, and do not require so much covering as adults ; and if they be covered too heavily, so as to make them perspire too much, and get overheated, they are apt to pitch off all covering, and expose themselves to cold. A little attention on the part of the mother or nurse, will enable her to adapt the covering to the requirements of each, as some children need more covering than others do.

Cleanliness should be scrupulously attended to in the nursery, and no soiled napkins, or other cause of foul vapour or discomfort, should be allowed to remain within its walls ; and children should be early taught to attend to and report their wants, and all infants are docile in this respect if they are properly trained. Carelessness in these matters may induce filthy habits, that, in some unhappy instances, become so established, that they remain incurable for life.

Some object to carpets on nurseries, because they retain damp, and are an obstacle to cleanliness ; but they have two advantages to recommend them. They are less slippery than a boarded floor, so that children are less likely to fall ; and they are not so unyielding as a hard floor, so that a child is not so much injured if it does fall.

The exercise of infants is also a subject worthy of notice. Every infant likes to be dandled, and this is a very suitable form of exercise ; but it should not be resorted to immediately after feeding, lest it should irritate the stomach, which requires rest after food ; nor should a child ever be pitched so high as to cause fear, or excite timidity. To dandle a heavy infant is, however, severe work, which a nurse cannot always continue, and to be trundled about in a child's carriage or perambulator, does not give sufficient exercise, and is serviceable only for change of air. Nature, always bountiful in resources, has, however, provided means by which infants can exercise themselves ; at first, by kicking out their legs, and moving their arms, while lying on their backs ; and, afterwards, by creeping on their hands and knees.

Some mothers are unwilling to allow their children to creep, lest it should teach them a bad habit, and prevent them from walking in proper time. Creeping is, however, the best preparative for walking, because it strengthens the child's muscles, and makes them equal to the task of supporting the body, while it gives time for the bones of the legs to become sufficiently consolidated to bear the weight of the body, without becoming curved or bent; and it also amuses the child, and increases its happiness. To prevent a child from creeping is, therefore, thwarting one of nature's laws, and depriving the infant of a decided benefit, and its rightful enjoyment.

All inventions for teaching children to walk are unnecessary, if not injurious. If the muscles have been sufficiently strengthened by creeping, all artificial aids can soon be dispensed with, and the child, feeling strong, will soon get confidence, and learn to balance the body and support itself.

It is true that some children continue to creep much longer than others; but these are infants endowed with large development of brain, and little formation of muscle or solidity of bone, rendering it unsafe for them to begin to walk soon.

But when children begin to creep, they require to be protected against accidents. Nothing should be left in the nursery which they might upset to their injury, or off which they might tumble. No door should be left open to allow them to come in the way of danger, and windows must always be properly secured, so as to admit sufficient air, without the risk of children dropping out.

WHEN SOLID FOOD MAY BE COMMENCED.

We stated in the article on artificial food for children, that the proper nourishment for children during the two first years of their existence, is milk or fluid farinaceous food, as being the mildest and best suited to their tender stomachs. We know that the formation of a full set of teeth gives evidence of the capacity for the enjoyment of solid food, and that some children get their full set of teeth at sixteen or eighteen months, but these cannot be taken as a guide for others. They are an exception to the general rule, and should be treated as such. We are, however, equally convinced, by experience, that no constitutional injury can accrue to these precocious children by being limited to fluid food to the end of their second year; nor would we advise solid food to be given to other children at this period, unless the first set of teeth has been perfected.

Nor should the change to solid food be too abrupt, but be commenced gradually, giving oatmeal or rice boiled in water and seasoned with salt, and eaten with milk; or good home-made bread and milk. Some of the healthiest and finest children that I have seen were nourished in this way, until after they had got their second set of teeth.

Many argue that, without getting animal food, boys especially cannot have sufficient muscular development; and that the use of vegetable food only retards the expansion of the powers of the mind, making children dull and stupid. But my first practice having been in the North of Ireland, during eight years, where the children of the peasantry were fed on vegetables, and these not the most easily digested, being potatoes only, and often without milk, I saw enough to convince any unbiassed mind that vegetable food is not only sufficient to nourish youths, but that it is also preferable to animal food in early life. Many of these peasant children, fed on potatoes and salt, had shoulders and arms perfectly brawny, and calves on their legs that promised to be sufficient for London footmen, without the trouble of padding. And their minds, in many instances, were so precocious, that the pointedness of their repartees, and the piquancy of their observations, often caused me to tax my time by listening to them.

Some consider also that unless children get animal food from an early age, they cannot have sufficient strength to withstand the attacks of fevers incident to youth. In Australia, where animal food for children is the rule, and vegetable food little used, one sees convincing proof of the fallacy of this opinion; and is convinced by demonstration that children whose blood has been rendered inflammatory, suffer more when attacked by fever, and have less chance of recovery, than children who had been accustomed to vegetable diet. In a few families who would be guided, and where vegetable food prevailed, children seldom required medicine, and if taken with any epidemic fever they recovered easily; while among those who had been indulged in animal food at pleasure the mortality was often fearful.

The possession of canine teeth, characteristic of carnivorous animals, indicates that human beings have a capacity for animal food; and after the eyeteeth have been perfectly formed there can be no objection to a little beef- or mutton-tea, or chicken-broth, given occasionally, with rice or bread, in place of milk. And after the fourth year, a lightly-boiled egg, or fowl, either roast or boiled, or

white fish, excepting those that are oily, may be given twice a week, or at most every second day, for dinner; rice, gruel, or bread and milk, being given morning and evening, as formerly. But red meat, as beef and mutton, is more inflammatory, and should not be indulged in until hooping-cough and measles have been got over.

THE MORAL TRAINING OF YOUTH.

Children are very imitative, and equally observant, and, like the softened wax, are ready to receive early impressions. Hence the necessity for teaching them, both by example and precept, to be subject to reason, and to yield to proper control.

Parents rearing children undertake a heavy responsibility, and those who indulge the caprices and encourage the self-will of their offspring have much to answer for.

The first grand and all-important lesson is submission, which can always be taught to any child by firmness combined with kindness. The parent or guardian having decided what food the child should get on that occasion, such article ought to be placed before it, while it is told distinctly it must eat that, or nothing else. Any relaxation of countenance, any tendency to compromise, are soon noticed by the child, and taken advantage of; nor will it fail by importunity, or, perhaps, by caresses, to try to prevail over the parent's weakness, and to gain its wish. But let this be obtained in a single instance, either as regards food or anything else the child may fancy, and we are certain that the authority and government of such parent ceases; he or she is dethroned; the child has obtained the mastery, and it will retain it.

Until children have been sufficiently educated by proper control, which should commence at an early period—say when the infant is three months old—they should never be allowed to come to table, or to eat with adults. By doing so they are exposed to one of two injuries—either to have their tempers broken by being refused what they fancy, or to get their stomachs injured by eating what is unsuitable.

The parent or guardian who is capable of managing a child that raves for anything improper for it, will say at once that it cannot be given; and by proper firmness will stop further importunity. But parents who, having refused, yield afterwards to the wishes of a child, give ample evidence that they are perfectly unfit for the sacred duty entrusted to them; and by fostering the caprices and self-will

of their offspring they too often train them for a life of misery, or an ignominious death.

Self-will, bad temper, and selfishness are the great causes of all the feuds that convulse society ; and to pamper these in children is highly calculated to render them miserable, and to fill our prisons or employ the executioner.

The common business of life requires mutual concessions by the different members of society. The power of controlling self-will is, therefore, the great source of happiness ; and to possess this power in an efficient degree it must be cultivated early, and practised often, so as to become confirmed by habit. The cravings of children should not be encouraged. They should be early taught that they must take what is suitable for them ; and if this lesson be inculcated with firmness and kindness, they will soon learn to be satisfied ; and contentment thus produced is the surest means of forming a good temper, which is always promoted by a healthy state of the stomach and digestive organs.

It is truly pitiable to see some children, who, born to foolish parents, or cared for by ignorant nurses, are indulged in every fancy, and allowed to eat at every hour food that is often quite unsuitable for them. Such children, although they may be blessed by the Almighty with good constitutions, are kept constantly weak and irritable, by acidity of a stomach constantly overloaded, and by relaxation of bowels, causing such frequency and straining at stool that the fundament often protrudes, and requires to be replaced.

Nor do children, such as I allude to, get any respite. The still hours of night, which relieve and recruit other animals, bring no rest to their stomachs ; for their inconsiderate guides continue to persecute them, and, even in bed, they are kept eating and drinking. A depraved appetite and morbid state of stomach, together with peevishness and irascibility of temper, are the natural result, so that the unfortunate children are rendered diseased both in body and mind.

In youth we find the influence of bad training in childhood equally perceptible. Plain food, suitable for boys and girls, is not relished ; made dishes and condiments are required by these spoiled children, who generally acquire also a taste for alcoholic stimulants. And having been accustomed to think of little but the gratification of their palates and wishes, as they advance in life their selfishness is disgusting to all their associates ; and being enslaved by the unrestrained dictates of their own evil tempers and passions, they are

seldom a blessing to their foolish parents, nor are they amiable members of society.

Nothing can compensate for the want of system and regular periods in feeding children. When these are established early, necessary obedience in other respects is easily obtained; but when these have been neglected, self-will, obstinacy, and perverseness are the usual consequence.

Children should not be allowed to eat during the hours necessary for sleep, and the custom of allowing children to take food to bed with them is very censurable; nor should children be let drink much or often. Children who are properly fed are seldom thirsty, and much fluid taken at meals dilutes the gastric juice, and lessens the power of digesting. Drink should be taken two hours after food, and good water is preferable to every other fluid for children, milk being too heavy and unsuitable for drink, unless it be largely diluted with water.

After the sixth year the periods for feeding children should be less frequent, four times in the twenty-four hours being sufficient; and as children should be accustomed to early hours both for rising and retiring to rest, their first meal ought to be given early, at five or six in the morning, and then they should get good home-made bread, with butter or treacle, to be followed by breakfast of oaten meal gruel and milk at nine; dinner of the lean of good beef or mutton, roast fowl, or white fish, with rice, mealy potato, or some light vegetable, at two o'clock; and for supper, at seven o'clock, porridge, rice, or bread and milk.

As bakers add alum to their flour to make their bread white, and as this is injurious to the stomach, it is desirable that every family should be able to bake their own bread, so as to be certain that their children get wholesome food. To procure good yeast or barm is the only difficulty in the way; and for the benefit of those who may not have a brewery convenient, we have given a form for making yeast with hops, and for baking bread in the article on dyspepsia, to which we beg to refer our reader.

As we mentioned previously, too much animal food overstimulates the system, heats the blood, and irritates the temper, and the more indigestible it is the evil effects will be the greater.

Veal, pork, goose, duck, cheese, salted and also preserved meat or fish, are difficult to digest, and should not be given to children. Roast is more nutritious than boiled meat. White fish, excepting eels and herring, which are oily, are easily digested by some; but they are

heavier for the stomach than fowl, or the lean of beef or mutton or venison. But idiosyncrasy of stomach must be attended to, and what causes nausea, should not be forced upon any child.

Ripe fruit in moderate quantity with bread forms an excellent breakfast for children, but dried fruit, as raisins, plums, and other stoned fruits, also preserved fruits, nuts, and almonds, are indigestible, and should not be given to children. Their vegetables should be well boiled and tender, as French beans, vegetable marrow, asparagus, turnip, cauliflower, and potatoes, if sound and mealy.

Pudding forms a pleasing variety for children, and, if made light either with or without currants, is suitable; but it should not be given after animal food, lest they should be tempted to eat too much. They should have the pudding first; but pastry is indigestible, and hot-buttered toast or cakes, as well as drawn butter or fat, cooked in any way, is indigestible, and unfit for children.

The food of children should be seasoned with salt, which is the only condiment they should get. Pepper, mustard, and spices should be reserved for that period of life when the constitution, broken down by toil and fatigue in the repeated conflicts we are exposed to in the battle of life, requires some artificial means to rouse its drooping energies.

Sugar is nutritious, and can be used moderately with safety, but when taken in large quantity it produces acidity of stomach, and impedes digestion. Tea and coffee are not commendable for children; if taken strong they excite the nervous system, which is generally too impressible in youth; and if taken very weak, they relax the stomach, and unfit it for digesting solid food.

Parents and managers of children, who have trained them to eat the most digestible food at regular hours only, as directed above, not because they prefer it, but because it is the most calculated to promote their health and strength, give us a sufficient guarantee that they are equal to the moral training of youth in other respects. Such parents will not be biassed or guided by the erroneous and dangerous opinion that it is necessary to accustom children early to eat any kind of food, and also to take alcoholic stimulants, to train the stomach to bear these, and to fit and prepare their offspring for mixing in society, and acting their part in the drama of life. It is certain that the great enemy of mankind, Satan himself, must have invented this theory, which is opposed both to reason and

experience, and is subversive of everything that is good in this world.

Next to the control of self-will, and obedience to parents and those placed over them, the great principle of truthfulness should be inculcated, and imprinted on the minds of children. Any deviation from truth, even in jest, should not be tolerated, and any attempt to conceal a fault by telling an untruth should be followed by double punishment; while a candid confession of an error, accompanied with sorrow and contrition for the crime, should meet with sympathy and forgiveness. But a universal indulgence for the repetition of error would be equally dangerous for the bold and daring, as mildness is necessary for the timid and retiring. In this, as in many other cases, the good sense of the parent or guardian, can best decide what is proper.

But the fact that children are imitative and observant must never be forgotten. And if parents wish their children to be truthful, they must never break faith on their part; thus, any promise made to a child should be punctually performed, even at great inconvenience, the child being made aware that this trouble is submitted to because to do so is necessary for the maintenance of truth.

If children must be corrected, it never should be done hastily, while under the influence of passion. They should be reasoned with, and made to feel that their crimes are punished from love, and a desire to make them good and happy. One slight correction, with this impression made on the mind of the child, will be more beneficial than many floggings, if executed and accompanied with sternness and harshness.

Children should not be terrified by goblins or any other false means, which weaken their nerves and make them pusillanimous; and they should be kept apart from an untruthful nurse or servant, with the same care as they should be separated from a contagious disease. Lessons taught by unprincipled servants have been the ruin of many a well disposed youth, both male and female.

Kindness of disposition and sympathy for the sufferings of others should be inculcated on the minds of children, who should not be allowed to tease cats or dogs, frighten birds, or kill flies for amusement. They should be taught that these all possess feelings as well as we do, and that it is cruel to persecute or injure them. Nurses, on the contrary, are in the habit of fostering a feeling of resentment and revenge, being accustomed to stop a child's cries when it falls, by

beating the floor, and thus cultivating one of the worst features of humanity, by causing the child to take pleasure in this imaginary pain and punishment.

A love for parents, nurses, brothers and sisters should be excited, as well as sympathy for their sufferings, children being taught to consider the happiness of others as a source of pleasure to themselves, and necessary for their own happiness. By inculcating this principle we adopt the best means of making ladies and gentlemen of our offspring, a distinction which is equally attainable by the humble as the exalted, because it does not consist in the observance of any set phrases, or any particular attitude, but in genuine benevolence of disposition, and a constant attention to the comfort and happiness of others, together with a just consideration of what is due to our fellow creatures. But children should always be instructed that truth must never be violated, neither to gratify themselves nor spare the feelings of others.

Next to truth, the principle of honesty should be fostered and established. Children should not be allowed to take or retain anything unless it be given to them, and any transgression of this rule should be immediately discountenanced and punished. On the contrary, they should be encouraged to be generous and liberal, taking care that when they part with anything it shall be replaced with another article, lest they should regret the loss.

As avarice, or greediness, is only another form of selfishness, and opposed to honesty, it should be discouraged in children, who are early influenced by a desire for approbation, which, being one of the happy traits in human nature, should be fanned and encouraged, as the best means of repressing dishonesty, and every other kind of selfishness.

Parents and guardians should therefore be careful to praise every display of ready obedience, truthfulness, honesty, and generosity in children, and to cultivate in youth a feeling of honour and high-mindedness. This is the happiest way of guiding and controlling children, and quite sufficient for those who are well disposed, timid, and sensitive; but for the perverse and callous, the rod may be necessary, and if required should not be withheld, care being taken to administer correction with kindness, so as to make a favourable impression on the mind, as well as the body.

The existence of a higher power than man should be early inculcated, and children should be taught to look up to God as the great rewarder of everything that is good, and the punisher of

evil. Lessons of piety taught by a loving mother make a lasting impression, so that some of the greatest men have referred to the prayers lisped at a mother's knee, as having had a permanent influence on their conduct during life. We know that the fear and love of the Great Creator are the only sure foundation of morals; without these every superstructure of obedience, truth, honesty, and self-control, is frail and tottering, incapable of withstanding the temptations of this wicked world, and the impulsive tempests of human passions.

Children should therefore be instructed that we are constantly under the all-seeing eye of the Almighty, and that every duty should be done because he requires it for his own glory, and the good of his creatures; and that every evil should be avoided or abandoned, because the commission of crime must subject us to the displeasure of God, and to punishment hereafter. Nor should such instructions be given in a manner calculated to excite gloomy forebodings, as if the Creator was a God of wrath and not of mercy. On the contrary, children should be taught that true piety is the only true happiness, and that God wishes his creatures to be happy, and to enjoy the pleasures he has so bountifully provided for the gratification of all our senses—sight, hearing, smell, taste, and touch—while the only recompense he requires on our part, is to enjoy these blessings with grateful hearts and cheerful countenances.

It is a false idea of religion to imagine that it requires us to be sad and gloomy. It alone is the true source of joy and gladness; and as childhood is the season of joyousness, the innocent amusements of youth should not be restrained, but their cheerfulness and happiness should be encouraged and promoted.

AMUSEMENTS FOR CHILDREN.

To be happy, children, like adults, must be constantly employed, and as they cannot be too much in the open air, when the weather is suitable, walking is a favourable means of giving both exercise and amusement; but it is always necessary to see that the nurse, while gossiping, does not keep children standing or sitting on damp ground, to get chilled.

But in wet or very cold weather children cannot walk out, and therefore parents should provide some suitable employment and amusement for them within doors. If confined to any one amusement or exercise their energies soon flag, and to interest them they

require variety ; to supply which is sufficient to exhaust all the resources which modern invention has furnished us with, so as to meet the different tastes and fancies of youth. In making our selection we should endeavour to occupy the mind as well as the body, and to find amusements calculated to make children think as well as to move their limbs. Good prints or pictures of different animals, if accompanied with a short description of their countries and habits, interest all children ; while marbles, nine-pins, humming-tops, wooden houses, Chinese puzzles, a safely-arranged swing, the rocking-horse, and skipping-rope, are calculated to amuse and exercise.

THE DRESS OF CHILDREN.

The dress and appearance of children give accurate information of the talent of the parent or guardian for training youth. Those who have been properly controlled from the third month of their existence, take pleasure in keeping their clothes clean and decent ; while children badly trained seem to delight in dirt and mud, with as much relish as poultry roll in dust in the fowl-yard. Now this is evidently at variance with the principle of consideration of what is due to our fellow creatures, because it must give unnecessary trouble and annoyance to the laundress, while it is also a sinful waste of wearing apparel and valuable time. It is true, some parents imagine that their children are too delicate to be restrained, which opinion is perfectly erroneous, because no taskmaster ever was so severe as self-will, and many children are made delicate by want of control.

The custom of covering only the bodies of children, and leaving their extremities and chests exposed to the air, is contrary to reason ; and although robust children be able to bear it, yet delicate constitutions must be injured by this partial method of clothing. The dress of children should be loose and comfortable, and all parts should be equally covered, except the head and neck, which, owing to the large supply of blood to the brain at this period of life, require to be kept cool, and should be protected from the influence of change of temperature by frequent ablutions or by sponging with cold water.

To muffle children too much is an error, because when overloaded with clothing they cannot exercise freely without perspiring too much, which renders them susceptible of cold. The material adopted for children's dress should be porous, and as flannel has the advantage

of all other textures in this respect, it is the most suitable in winter ; and cotton standing next in this rank is most suitable in summer, as well as for sleeping in, flannel being too relaxing to be worn at night. Nor is a flannel by day absolutely necessary for robust children, even in winter ; but delicate constitutions require it, to prevent a feeling of chilliness.

One rule is indispensable—not to allow children to wear during the day the dress they have slept in at night, because the exhalation given off by the skin during the night, consists of effete matter, which the constitution requires to get rid of, and should not be kept in contact with the body during the day, lest it be absorbed again into the system.

As linen is less porous than cotton, it is not so suitable, either for sheets, or a covering to be worn next the skin ; but in hot weather it does very well as an external covering. A sufficient supply of blankets makes the best bed covering. Thick, heavy counterpanes are almost impervious to air, and being calculated to obstruct the free evaporation of the exhalations from the skin, they should be discarded. On the same principle, all waterproof coats, if worn for many hours in succession, are injurious ; and with these we must include patent leather shoes and boots, as well as gutta percha coverings for the legs and feet.

BATHS FOR CHILDREN.

As the skin is the great avenue by which effete and noxious particles pass off from the system, every means that tends to secure a healthy action of this membrane is of vital importance, and nothing proves to be more salutary than regular bathing.

In addition to the customary morning ablution for cleanliness, children, after the age of two years, should have a bath every day, about two hours after breakfast. A tepid bath, about the temperature of 85° Fahr., is the most agreeable in winter, but in summer the cold bath is more bracing and invigorating. Care should, however, be taken that a child be not frightened by being plunged hastily into a cold bath ; it should rather be enticed to take it from choice, because fear has such a depressing influence on the circulation of the blood, that its action would counteract and prevent the good effects of the bath.

A shower-bath is preferable for children if they be not too timid, and this feeling is easily got over by using a watering-pan as for

flowers, until the child gets accustomed to be sprinkled, and then having a sieve on the principle of a telescope, so that the bath can be low at first, and elevated afterwards, as required. Some irritable and sensitive constitutions are most benefited by a tepid bath, even in summer, and in this matter the feelings of the child should be consulted and accommodated. If suitable for them, children soon get to like the cold water, whether as shower or plunge bath. And after the bath children should be well dried with a coarse towel, and encouraged to take exercise for some time before dinner.

SECOND TEETHING IMPORTANT.

Between the sixth and eighth year children begin to lose the primary set of teeth, which now become too small to fill the enlarged jaw.

By the natural growth of the second set, which are situated beneath the first teeth, these are gradually pushed out of their sockets, so that they become loose. When this occurs they are injurious, by irritating the gums, and should be removed; which is easily accomplished by a strong thread put around the tooth down at the root, and then acted on by a smart pull. But children whose constitutions have been injured by being dosed with grey powder and improper feeding, seldom retain their first set of teeth until the approach of the second set. With such sufferers the first set begins to decay from the fourth to the sixth year, causing so much irritation of the gums, that it is necessary to have their teeth removed by forceps, in order to lessen the injury of the second set, which are too often affected by the same cause. But the removal of the first set should not be adopted hastily, nor from choice, because the attachment between the first and second set cannot be broken without more or less injury to the permanent teeth, and should be done only as the least of two evils.

As the regularity in the position and growth of the second set, or permanent teeth, is calculated to influence during life the articulation of sounds and the appearance of the human countenance, the mouth being an expressive feature of the face, great attention should be paid by parents and guardians to the manner in which these teeth make their appearances.

Being larger than their predecessors, and coming occasionally before the jaw bone is sufficiently developed, the space occupied by the first set may not be wide enough to receive them; and when the

two central incisors appear, it is often necessary to remove one lateral incisor on either side, to prevent the coming teeth from growing awry, overlapping, and disfiguring the person.

But the reverse of this may occur, and the first teeth having been diseased, as we have stated already, may have been removed a number of months before the approach of the second set, leaving too much room for the two first incisors, which appear too far apart from each other, with a space between them, which would be unsightly, and, if not corrected, would crowd the next two teeth and obstruct their growth. This should be prevented by placing a couple of folds of silver wire around the tops of the two central incisors, and by twisting the ends of the wires a little tighter every day, until the teeth are brought near each other.

We stated that the natural growth of the permanent teeth forces the primary teeth out of their sockets, so that they become loose and drop off; but to this general rule there are exceptions, and occasionally the permanent teeth appear on the inside or the outside of the primary set, leaving these firm in their sockets; and if the permanent teeth were allowed to grow in this position they would be a constant source of discomfort, by irritating the tongue if on the inside, and the lip if on the outside.

To remedy this it is necessary to extract the primary or old tooth, so as to make way for the permanent or new tooth, which latter may require the aid of silver wire placed behind or before it, and attached to the adjoining teeth, to press it back into its proper position.

In cases of this kind stupid mistakes have been made by uneducated persons, pulling the young or permanent teeth in place of the old or primary ones; which is a sad error, because the primary teeth, when left, soon become diseased, and are lost at an early period in life.

The permanent teeth should not be pulled while they are sound, and to this rule there is only one exception, which is the following. In some instances it is necessary to extract the first canine or eye-teeth, to allow the second lateral incisors to get up; and afterwards, when the second or permanent canine teeth appear, there is not space for them. In such a case it is advisable to extract the third molar teeth, which are the first of the permanent set, and are consequently the oldest teeth in the jaw. They are also the largest, and, owing to one or both of these causes, they are generally the first to become hollow, or affected with caries, and consequently the most eligible to be removed. When these teeth are extracted in good time

the anterior molar teeth grow back, and allow the eye-teeth space to come up in their proper place.

Some dentists, who have not studied anatomy, refuse to pull these molar teeth, and fancy that the solidity of the whole tooth edifice depends on their presence, as an arch is stayed by its keystone. But this idea is perfectly unfounded; nor could any teeth be removed the absence of which would be so little felt in after life. Because, in addition to the anterior molar teeth growing backwards towards the vacant space, the posterior molars grow forwards, allowing the wisdom teeth to get up sooner, and with less suffering; so that the vacancy made by extracting these, the first of the permanent teeth, is nearly filled up, and their absence is little felt, while no deformity is caused by the want of them.

THE DISEASES OF CHILDREN.

Children who get proper food, in moderate quantities, at regular periods only, and enjoy exercise in the open air, are seldom sick or require to be dosed; and it is quite certain that the less children are drugged they thrive the better. The human constitution has great power in throwing off disease, and removing what is injurious, and is oftener injured than served by the officious interference of ignorant nurses, over-anxious mothers, and some heroic practitioners, who dose unfortunate children with mercury unnecessarily. This medicine should not be admitted into any nursery; and most medical practitioners are now convinced that, if given under any circumstances, it should be in minute doses, or in the incipient stage of fever.

When children have been over-fed, Nature, to redress the injury, lessens the appetite, and the child refuses food, and by doing so the digestive organs would soon recover, if permitted; but the never-failing dose of grey powder must be thrust down the child's throat, which, by stimulating the stomach, creates a false appetite, and causes the infant to eat, contrary to the dictates of Nature, the wants of the constitution, or the good of the child's health. Still, the nurse or mother has obtained a victory over the rebellious stomach, by means of the grey powder; which confirms her confidence in it as an invaluable medicine, and causes her to overlook the consequences. But the relief obtained is only transient, and the dose must be repeated, to be followed shortly by inflammation of the stomach and bowels, as the result of the irritation caused by the unnecessary dosing with grey powder.

The want of pure air, even singly, but still more so when combined with improper food, is highly calculated to injure the health and make an unfavourable impression on the constitutions of children; and too much care cannot be taken to have a thorough change of air, both in sitting-rooms and bed-rooms, by having the windows to open both at top and bottom, and by open doors, causing a free current of air to carry off the carbonic acid gas that is exhaled from the lungs, which, when allowed to accumulate in any apartment, becomes very noxious.

Equal care must be taken to prevent children from sitting in draughts thus formed, by taking advantage of their absence, or having the children removed to another room, for the purpose of free ventilation. During the day when the air is dried by the rays of the sun, is the most favourable time for ventilating rooms. The damp air of night, when admitted freely, is not safe; but at night sufficient renewal of air can be obtained by an opened passage door and an open fireplace, there being a constant current up the chimney.

We do not advocate fires in bedrooms unless necessary for the attendance and comfort of the sick; but if lighted for a couple of hours in the evening, and then removed, it is a happy method of ventilating, to which there can be no objection. Schoolrooms should also be well ventilated, and half-an-hour's relaxation given to children for that purpose, at proper intervals, would be time improved by invigorating their minds as well as their bodies.

We would strongly recommend attention to food and drink, pure air, exercise, and frequent baths as the best means of preserving the health of children; while we as strenuously dissuade the pernicious habit of dosing children unnecessarily. And in addition to the means of exercise formerly mentioned, the modern improvement of gymnastic exercises for youth should be cultivated, as being conducive to the development of muscle, together with the growth and improvement of the body. Nor should this form of exercise be limited to the male sex. It is equally calculated to benefit females also, and if introduced generally into their boarding establishments it would be found far more effectual in preventing and improving curvature of the spine than all the surgical apparatus that has been invented for that purpose; while this means of cure, in place of harassing the patient and injuring the constitution, as confinement, straps, and bandages do, would give pleasure and enjoyment to the invalid, and impart fresh life and vigour to the frame. If young ladies were allowed to spend one hour in the forenoon and one in the

afternoon of each day in gymnastic exercises, it would prove much more serviceable to them than sitting constantly at the piano, drawing table, or other study; and be the happiest means of preventing spinal disease, affections of the joints, and other maladies.

Exercise on horseback for youths, both male and female, has also a high place in our estimation; but it is not equally suited for all constitutions, as the nervous and timid cannot enjoy it so as to benefit by it. For delicate persons possessing little muscular development, and requiring exercise without much exertion or fatigue, it is peculiarly adapted, provided they can command a moderate portion of courage, without which the saddle is not an enjoyable seat. To those who have a taste for riding on horseback, no other exercise is equally conducive to the health of both body and mind; for if young persons are taught to sit properly on the saddle, the chest is expanded, the lungs are stimulated by the frequent change of air, and a healthy impulse is given to all the organs of the body; while the mind is occupied and amused by the management of the steed, which should be gentle, sure-footed, free from tricks, and well trained.

Having noticed hooping-cough and the other diseases incident to childhood in the previous articles on contagious and other diseases, and having alluded to the causes and treatment of other local affections, when directing the proper management of children, a rehearsal of their diseases would be an unnecessary repetition, which we are anxious to avoid, and beg to refer the reader to the articles descriptive of each affection.

In conclusion, we would eagerly persuade parents to abstain from the pernicious custom of giving medicine unnecessarily. Some foolishly imagine that medicine should be taken once or twice a week to prevent the approach of disease; but, like food, medicine should not be taken till the constitution requires it.

When administering medicine it is also necessary to recollect that its office is to assist nature to throw off the disease, and consequently other natural means, such as rest for the body, and the action of the skin by increased perspiration, must not be neglected.

PART IV.

THE MANAGEMENT OF CASES OF POISONING.

ARSENIC being the most familiar and in common use for the destruction of rats and other vermin, is the poison given most frequently either by accident or design.

It is the most active and destructive of the mineral poisons. When swallowed, it leaves a metallic, austere taste in the mouth, followed by an increased flow of saliva or desire to spit. Nausea and vomiting soon set in, and the retching is often so severe that blood is thrown off with the contents of the stomach, which appear dark coloured.

The sensation of heat in the throat and stomach causes intense thirst, while the irritability of the stomach is so great that everything swallowed is immediately rejected; and as the peristaltic action of the stomach is greatly increased, the poison soon reaches the bowels, and causes severe griping and purging of green offensive matter, followed by such symptoms of depression of the vital powers that the patient often swoons or faints, the body being covered with cold perspiration. The pulse is small, frequent, and intermitting, accompanied frequently with palpitation of the heart, and in fatal cases, delirium, with convulsions, terminates the sufferings.

Treatment.—The great object is to remove the poison from the stomach as quickly as possible, so as to prevent its corroding influences on the mucous membrane, and its absorption into the blood. For this purpose the double-acting stomach-pump is the most efficient means, which, by throwing into the stomach lime-water, or in the absence of this, sugar and water, and pumping it out again alternately, enables us to remove a great portion of the poison; but the mineral being heavy, part gets attached to the mucous membrane of the stomach, and cannot be thoroughly dislodged.

Hence recoveries from poisoning with arsenic are always tedious, and the greatest care is required during convalescence.

If a stomach-pump cannot be obtained, the patient should be made to take large draughts of lime-water, sugar and water, linseed-tea, chalk-water, or water off the rust of iron. Some consider the latter an antidote of great efficacy against arsenic, and from the good effects we have experienced by its use, we can recommend it as highly beneficial. But whatever fluid is adopted, it must be given in large quantities, so as to cause vomiting to carry off the poison.

When the stomach has been well washed out, if spasms or the disposition to retch continue, thirty drops of laudanum for a man, and twenty drops for a woman, should be mixed in six tablespoonfuls of sugar and water, and one tablespoonful given every ten minutes till vomiting ceases.

The tenesmus, or straining of the lower bowel, is sometimes very persistent and distressing, and requires forty drops of laudanum for a man and thirty drops for a woman, to be mixed with a dessert-spoonful of oil or sweet milk, and thrown up into the bowel as an enema by a small syringe.

The immediate fatal effects of the poison being counteracted by the above means, we have still to combat inflammation, and consequent ulceration of the stomach and bowels, which are frequently difficult to control. For this purpose, flannels wrung out of hot water, placed over the stomach and bowels, and renewed frequently, are always grateful to the feelings of the patient, and very useful. But if these do not soon relieve the pain, leeches should be applied, from six to a dozen, according to the age and strength of the patient, and the bleeding from them should be encouraged by repeating the fomentations with hot flannels, and also reapplying the leeches every twelve hours, till pain subsides.

The patient's stomach, meanwhile, must be protected from irritation. Nothing approaching to solid food can be tolerated. A wine-glassful of linseed-tea, barley- or rice-water, made palatable with a little sugar, is the only food or drink that is admissible. Nor should this be given too often, but only when the stomach relishes it, say every two or three hours.

The great weakness of the patient causes the inexperienced to imagine that more nourishing food, or even stimulants, may be required; but the use of either is a fatal error, and the recovery of the patient is certain to be prolonged or hastened, in proportion to

the mildness of the ingesta, and the care with which the stomach is treated.

After the third day a tablespoonful of milk can be added to the wineglassful of rice- or barley-water, and if this be borne well, next day the patient may try equal parts of milk and rice-water. In the course of a week milk alone may be admissible ; but if it feels heavy on the stomach, it should still be diluted, until the constitution rallies, and a natural appetite indicates the power of digesting more solid food. Then ground rice, arrowroot, or maizena, boiled in water and eaten with milk, may be tried, and in a few days beef- or mutton-tea or chicken broth may be substituted for milk with the farinaceous food ; and these having agreed with the patient, a cup of tea with stale bread morning and evening will likely suit, with a little roast fowl and boiled rice for dinner ; but beef or mutton must not be returned to hastily, and only in small quantities, with caution.

STRYCHNINE.

The use of this as a poison for dogs and foxes has made its powers generally known, and it is frequently taken by persons wishing to commit suicide, or by accident, from want of care.

It is a vegetable poison, being the alkaloid or base, obtained from *nux vomica*.

When taken into the stomach it causes giddiness, tremors, twitchings of the muscles, and incontrollable movements of the limbs, succeeded by spasmodic convulsions of all the muscles of the body. These spasms are generally felt first in the great toes, from which they rise to the legs, the body, and finally to the head, causing locked-jaw in fatal cases. But even in the severest cases the patient remains conscious, and by this means it is distinguished from epilepsy ; while the spasms of the limbs, as a first symptom, distinguish the action of strychnine from locked-jaw, which never commences in this manner.

The effect of this poison is also very different from that of arsenic, because it produces no inflammation of the stomach and bowels, and acts only on the nervous system, and especially on the spinal marrow. Its operation is likewise much more rapid than that of arsenic, and hence the difficulty of treating such cases, there being little opportunity for the application of remedies, if the dose taken has been sufficient.

Treatment.—The double-acting stomach-pump, if procurable,

should be used immediately to empty the stomach, and in the absence of this, thirty grains of sulphate of zinc, dissolved in a tea-cupful of water, should be given, and vomiting excited by tickling the throat with a feather or the finger, and then drinking freely either vinegar and water, or lemon-juice and water.

Nicotine, the alkaloid from tobacco, is found to be an antidote for strychnine, but as it is also a very powerful poison, it requires the presence of a medical practitioner to watch its effect, and regulate the dose.

OXALIC ACID.

As this poison is less active than either of the former, it is seldom chosen for the purpose of suicide, or by those who wish to destroy the life of others; but being in common use for cleaning straw bonnets and other purposes, it has often been taken by accident, owing to its likeness to Epsom salts.

Such mistake is soon manifested by the burning, severe pain of stomach, white coating on the tongue, and nausea, which quickly supervene, followed by giddiness, and dilated pupils; and if the dose has been sufficient, unless relief is obtained, convulsions soon set in, and generally prove fatal.

Treatment.—Give, as soon as possible, a dessert or tablespoonful of chalk, equal in quantity to the oxalic acid swallowed, and mixed in water. This neutralises the acid by uniting with it, and forming oxalate of lime, which, being insoluble in the stomach, becomes inert, and only requires to be thrown off by drinking freely of tepid water, and tickling the throat with a feather or with the finger to provoke vomiting.

Patients who have suffered from accidents of this kind require careful management of the stomach for some time afterwards; for, although much less severe than arsenic, yet oxalic acid inflames the stomach and bowels. The mildest food only is admissible; milk, if it agrees with the person, and if not, arrowroot or sago boiled in water, and seasoned with salt or sugar. Solid animal food should not be eaten until the tongue appears clean, and the stomach and bowels are free from pain on pressure.

HYDROCYANIC, OR PRUSSIC ACID.

The instantaneous deadly effects of this poison, when taken in large quantity, make it a favourite means with those wishing to

commit suicide, its action being so rapid that no time is allowed for the application of remedies. Even the cause of death, when this poison has been the agent, is difficult to ascertain, because it leaves no imprint on the tongue, throat, nor stomach, and can be discovered only by its strong and peculiar odour about the person, and in the phial which contained it.

If taken in dangerous doses, say ten minims, it produces faintness, giddiness, loss of sight, difficulty of breathing and syncope; and in overdose, three or four minims, or in moderate dose, two minims, in some constitutions, it causes spasmodic action of the diaphragm of a singular kind, between sighing and hiccup.

Treatment.—To remove spasmodic action from small doses, it is sufficient to discontinue the acid for a time until these symptoms cease, and then take the medicine less frequently, or in smaller dose.

But when hydrocyanic acid has been taken in dangerous quantity, so as to produce difficulty of breathing or syncope, it is necessary to stimulate the nervous system by giving aromatic spirit of ammonia, sal volatile, a teaspoonful in a wineglassful of warm water, or twenty drops of fluid ammonia similarly diluted with water, every hour or every half hour, till the patient rallies.

In the absence of these, a dessertspoonful of spirit or oil of turpentine, in a wineglassful of warm sweet-milk, has a good effect, or brandy and warm water, together with sprinkling cold water on the face and chest.

CHLOROFORM.

This is a narcotic poison, which destroys life by producing congestion of the lungs, when it is inhaled to allay pain or suspend sensibility during the performance of surgical operations.

In the fatal cases that have occurred from its use, death was so sudden that no remedies could be applied; nor did any previous symptom indicate the event. But when given in overdose it produces nausea, vomiting, headache, convulsions, unconsciousness, and great prostration of strength.

Treatment.—Free admission to the lungs of the external air is the best restorative, together with the application of hartshorn to the nostrils. Stimulants for the stomach are not applicable, because the power of deglutition is lost, but artificial respiration should be practised, together with cold affusions on the face and chest.

OPIUM.

This is also a narcotic poison, which acts chiefly on the nervous system, and especially on the brain. The symptoms produced by it are drowsiness, stupor, delirium, contraction of the pupils, cold perspiration, and stertorous breathing, which is generally the harbinger of death.

It is sometimes difficult to distinguish between the soporific effects of opium and alcoholic stimulants. The most distinctive marks are the absence of the familiar perfume of the breath from those suffering from the effects of alcohol; and the contraction of the pupils, which is always characteristic of the action of opium in overdose. But the same treatment is applicable to both.

Treatment.—The stomach-pump, if it can be procured in good time, is the best remedy, and the speediest means of getting rid of the poison. But, in the absence of this instrument, thirty grains of sulphate of zinc, or ten grains of sulphate of copper, bluestone, dissolved in a teacupful of water, should be administered, and vomiting excited, by tickling the throat with a feather or the finger, and by drinking frequently of lukewarm water.

The stomach having been thus relieved of its contents, the patient should have a breakfastcupful of strong tea or coffee, to be followed by a teaspoonful of sal volatile, or twenty drops of fluid ammonia, hartshorn, in a wineglassful of tea or coffee every hour, until the symptoms improve, and the patient becomes conscious.

It is necessary also to rouse the patient occasionally to prevent coma setting in, by keeping him sitting erect, speaking to him, and by keeping the head cool with ice or cold cloths frequently renewed, while a mustard bath is applied to the feet and legs.

Such patients require rest and care for some time afterwards, and the nervous system, the brain especially, should be allowed perfect quietness until it rallies, and every cause of irritation should be removed. Solid animal food should be avoided for a few days, and beef or mutton tea, or chicken broth, with rice or stale bread taken in moderate quantity. Quinine is necessary as a tonic, and one grain should be taken after breakfast and dinner, as soon as solid food is resumed.

STRAMONIUM, OR THORN APPLE.

This is also a narcotic vegetable poison, the flowers of which being sweet to the taste, are often eaten by children, and produce vomiting,

giddiness, delirium, stupor, and convulsions, which, when accompanied with cold sweats, generally prove fatal.

Treatment.—The stomach should be emptied of its contents as soon as possible, by giving twenty grains of sulphate of zinc, dissolved in a cup of tepid water, half to be taken at first, and a tablespoonful of the remainder every ten minutes, till vomiting commences, which should be encouraged by irritating the throat with a feather or the finger, and by drinking two or three cups of tepid water at intervals.

The contents of the stomach having been evacuated, the child should get ten drops of sal volatile, or four drops of fluid ammonia, in a wineglassful of toast-water every hour, until it rallies; and the head should be kept constantly cool by ice applied to it, or by damp cloths wrung out of cold water.

The food for some days should be rice, arrowroot, or maizena, boiled in water, and eaten with milk. The same treatment is applicable to all cases in which poisonous herbs or fruits have been taken into the stomach; but thirty grains of the sulphate of zinc is the proper dose for an adult.

TARTAR EMETIC.

This is a mineral poison, it being a salt of antimony. As an emetic, when it is desirable to produce nausea, as well as to empty the stomach, in inflammatory affections of the lungs and other parts, it is an efficient agent; but its effects on some constitutions are so severe, that it requires to be given with caution. Even in the usual dose for emptying the stomach,—four or five grains dissolved in a cup of water, and given in divided portions,—it occasionally produces symptoms of poisoning, such as violent retching, hiccough, pain of stomach, severe colic, purging, spasms or cramps of the limbs, faintness and difficulty of breathing; and, in larger quantity, these symptoms being aggravated, it may destroy life.

Treatment.—The best antidote for this poison is an infusion of nut-galls, half an ounce to the pint of boiling water, a wineglassful to be taken every ten minutes, till the stomach feels relieved. This decomposes the salt of antimony, and forms a tannate, which, being insoluble, is inert, and can be removed from the stomach by tickling the throat with a feather or the finger, and by drinking lukewarm water.

If nut-galls be not at hand, a decoction of the yellow cinchona bark, one ounce to the pint, can be substituted, of which a teacupful

should be taken frequently, and vomiting excited, until the poison is rejected.

As the brain becomes congested by the action of this poison, the head should be kept cool; and its influence on the stomach and bowels is so corroding, that it unfits them for digesting anything except the very mildest food, as milk or fluid farinaceous food, in small quantities.

SULPHURIC ACID, KNOWN AS VITRIOL.

This corrosive mineral poison is frequently swallowed by accident, being taken in mistake for brandy or other spirit.

When swallowed, it causes a harsh, disagreeable taste in the mouth, a sensation of burning in the stomach, together with vomiting and a very fetid breath, the ejected matter being accompanied with blood. The mouth and throat are either excoriated, or their mucous membrane is converted into a white film; the patient is extremely restless, and symptoms of inflammation of the stomach and bowels soon supervene, and require immediate attention and relief.

Treatment.—The great object is to neutralise the acid, by introducing into the stomach an alkali, as magnesia, or the bicarbonate of soda or potash; either of these combines with the acid, and forms the familiar Epsom salt, Glauber's salt, or sulphate of potash, which acts as an aperient on the bowels, and carries off the bad effects produced by the acid.

The quantity of alkali should be in proportion to the quantity of acid that may have been swallowed; from a dessert- to a table-spoonful, largely diluted with water, half a pint or a pint, taken in divided portions at short intervals. If magnesia or the bicarbonate of soda or potash cannot be obtained, soap may be used, as the alkali in it combines with the acid, and the oily portion lubricates the inflamed mucous membrane. An ounce of soap should be dissolved in a pint of boiling water, to be taken tepid, in divided portions.

The inflammation caused by the corroding effects of the acid on the mucous membrane of the throat, stomach, and bowels, must next be attended to. A warm plunge bath at 98° Fahr. has great influence in allaying the pain, while it lessens also the inflammation, by diverting it to the surface. If this be not available, flannels, wrung out of hot water, placed over the chest, stomach, and bowels, and renewed often, are very serviceable; and should be continued even after the bath, till pain abate. Should these measures not be suffi-

cient, leeches must be applied over the parts that are most pained ; from six to a dozen, according to the strength of the patient, the hot fomentations being continued afterwards, and the leeches repeated if required.

To procure sleep, it is sometimes necessary to give an opiate, and Dover's powder is the preferable form ; from six to ten grains, in a little syrup, at night, do a double service by disposing to the skin an increasing perspiration. The food should be the mildest, equal parts of toast- barley- or rice-water and milk, of which a wineglassful may be given every two hours, till pain abates ; and the appearance of the tongue indicates that the stomach can digest a little farinaceous food, which must be given in small quantities, and no solid animal food till all symptoms of inflammation disappear. The same treatment suits for poisoning by muriatic or nitric acid.

FLUID AMMONIA.

This, although an alkali, is a corrosive poison, and when taken undiluted into the stomach it produces symptoms almost similar to those of sulphuric acid—destruction of the mucous membrane of the mouth and throat, burning in the chest and stomach, followed by vomiting of blood and purging. And in addition to these symptoms, it causes a feeling of suffocation which might at once prove fatal. Hence the inhalation of the vapour of strong ammonia is very hazardous, especially when applied close to the nostrils.

Treatment.—This being a volatile alkali, a light or weak acid is sufficient to neutralise it, as vinegar and water or lemon juice, or the solution of citric acid, to be taken freely, and to be followed by mild diluents, as equal parts of milk, toast- barley- or rice-water, a wineglassful to be taken every two hours, until the symptoms abate ; but no solid food till convalescence is well established.

If the quantity of ammonia taken has been large, severe inflammation of the stomach and bowels may ensue, requiring warm fomentations, and also leeches, as directed above for sulphuric acid.

The fixed alkalies, as soda and potash, when taken in overdose, may have stronger acids to neutralise them, as sulphuric or muriatic acid, largely diluted, twenty drops to a wineglassful of water, to be repeated if necessary ; but equal parts of vinegar and water, or lemon juice, do very well, with strict attention to inflammatory symptoms, and proper attention to food and drink, till the stomach recovers, and can digest food.

NITRE, SALTPETRE.

This is sometimes taken by mistake for Glauber's salts, and in large dose, say one ounce, it produces symptoms of poisoning,—a burning pain of stomach, vomiting, severe purging, with bloody stools, and occasionally bloody urine, difficult breathing, faintness, and, in fatal cases, severe convulsions.

Treatment.—If the stomach pump can be applied soon after the nitre has been swallowed, it affords the best means of relief. In the absence of this instrument, thirty grains of ipecacuanha, in powder, should be mixed in a cup of water, half to be taken at once, and a tablespoonful of the remainder every ten minutes, till vomiting commences, which should be encouraged by drinking lukewarm water, and, if necessary, tickling the throat with a feather or finger.

After the stomach has been emptied, if pain continues, flannels wrung out of hot water should be placed over the stomach and bowels, and often renewed; and if fomentations are not sufficient to give relief, leeches must be applied, to check inflammation, six or a dozen, according to the strength of the patient, and the extent of the suffering. Opiates are generally necessary to control the griping and straining of the bowels, and when given as an enema the effect is always salutary. Twenty drops of laudanum in a dessert-spoonful of oil or sweet milk should be thrown up into the bowel by a small syringe, as any large quantity would be rejected and lost; and, if required, this may be repeated every eight or twelve hours.

As after the effects of other poisons the powers of digestion are paralysed, and anything approaching to solid food cannot be borne, milk, in equal parts with toast-barley- or rice-water, is all that should be allowed until the stomach and bowels are restored to a healthy state.

NITRATE OF SILVER, CAUSTIC.

This metallic poison is sometimes swallowed by children, and corrodes the stomach, causing excruciating pain and difficulty of breathing.

Treatment.—Common salt is the best antidote for this poison, because it decomposes the caustic, and forms a muriate of silver, which, being insoluble, is inert, and cannot injure the stomach.

A dessert- or a table-spoonful of salt, according to the quantity of caustic swallowed, should be dissolved in a tumbler, or in a pint of warm water, and taken immediately; and, after this, twenty or

thirty grains of ipecacuanha powder, mixed in a wineglassful of water, should be taken, and vomiting encouraged by tickling the throat with a feather or the finger, and by draughts of lukewarm water, repeated, until the stomach is thoroughly emptied.

If symptoms of inflammation follow, they must be combated by fomenting with hot flannels over the seat of pain, and, if required, by the application of leeches, three to a dozen, according to the strength of the patient, and the acuteness of the pain; and these means must be continued till pain ceases.

The food should be equal parts of milk, with toast- barley- or rice-water, in small quantities—say a tablespoonful—frequently, but no solid food for some days.

TOBACCO.

This is a narcotic vegetable poison, which is frequently used so as to destroy the nervous system piecemeal, or by slow degrees; but it is seldom taken in such quantity as to prove immediately poisonous.

Its alkaloid, nicotine, is a powerful poison, and acts rapidly, but it is not sufficiently familiar yet to have come into use as a suicidal agent.

Tobacco acts on the nervous system and the brain, causing headache, nausea, vomiting, giddiness, great prostration of strength, cold sweats, and if the dose has been large enough, convulsions and death.

Treatment.—If we have reason to believe that the poison is in the stomach, thirty grains of ipecacuanha should be mixed in a cup of tepid water, half to be taken at once, and a tablespoonful of the remainder every ten minutes until the stomach is relieved of its contents. But if the symptoms be those of depression of the vital powers, threatening coma and death, brandy, or other spirit, in small and frequent doses, is the proper remedy; together with a mustard bath to the extremities, and a mustard cataplasm to the chest.

PHOSPHORUS.

This is a corroding poison, which being used in making match lights and poison for cockroaches, is sometimes swallowed by children, and is calculated to destroy life. Even when given as a medicine, its active qualities should be considered, and the dose regulated accordingly, because its operation is very hasty and powerful in some instances.

Treatment.—The patient should drink large quantities of calcined magnesia, mixed in water, which does a double service, by preventing the combustion of the phosphorus in the stomach, and the formation of phosphoric acid. If magnesia be not at hand, tepid water should be drunk, so as to fill the stomach, and excite vomiting, which should be encouraged by tickling the throat with a feather or the finger, until the ejected matter ceases to have the smell of garlic when thrown into the fire, and to leave the taste of garlic in the mouth, which are characteristic of phosphorus.

OIL OF SAVINE.

This is a narcotic vegetable poison, which it is necessary to notice, because it is sometimes used as a medicine, and for pregnant women is very dangerous, as it may produce abortion and death, by causing inflammation of the stomach, vomiting, severe purging, and convulsions.

Treatment.—If seen in good time, the patient should be made to drink tepid water freely, so as to excite vomiting, and carry off the poison; but if symptoms of inflammation have set in, a warm plunge bath, at 98° Fahr., followed with fomentations of flannels wrung out of hot water, placed over the stomach and bowels, and often renewed. If tenesmus or straining continues, or convulsions supervene, twenty drops of laudanum, mixed in a dessert-spoonful of oil, or sweet milk, should be thrown up into the bowel by a small syringe, as an enema, and repeated every eight hours, if required, to alleviate suffering.

CORROSIVE SUBLIMATE.

As mercury is known to be a very active agent either for good or evil, it is recommended by every pretender to medical knowledge, and this, its most active preparation, is so commonly used, that unhappy accidents are of frequent occurrence.

It is a metallic poison, and when taken into the stomach in any large quantity it produces a sensation of burning in the throat, great thirst, a metallic taste in the mouth, an increased flow of saliva, nausea and vomiting, griping pains of stomach and bowels, diarrhoea with great straining, cramps of the bowels and limbs, and convulsions, which, if accompanied with cold perspiration, always

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forebode a fatal issue of the case, unless it be averted by judicious and very active measures.

Treatment.—Albumen is the best antidote for this poison, because it decomposes the corrosive sublimate, and converts it into calomel, which, acting as a purgative, is carried off by the bowels. The whites of six, twelve, or two dozen of eggs, in proportion to the quantity of the poison that has been taken, should be mixed with double the quantity of water, and a wineglassful given every ten minutes, until the burning in the stomach abates.

If eggs be not convenient, starch, largely diluted with water, may be given in the same manner; and in the absence of both, arrow-root should be used for the same purpose. As soon as these means have reduced the pain of stomach, the patient should drink lukewarm water, and provoke vomiting by tickling the throat with a finger or a feather.

Severe inflammation of the throat, stomach, and bowels, is the inevitable consequence of the action of this poison; and to alleviate its violence a warm plunge-bath at 98° Fahr. should be given as soon as the stomach has been emptied of its contents; and after the bath, flannels wrung out of hot water should be placed over the stomach and bowels, and renewed frequently. And if these means be not sufficient to control the inflammation, from six to a dozen leeches, in proportion to the strength of the patient, should be applied over the seat of pain, and the bleeding encouraged by fomenting as before.

A tedious convalescence is the most that can be anticipated; and until health is restored the food must be very mild, and nothing taken into the stomach but what is suited for a surface highly inflamed, or perhaps ulcerated. Equal parts of milk and rice-water, in the quantity of two or three ounces every three hours, is generally as much as can be borne. When animal food is tried it must be in a fluid state—chicken-broth, beef- or mutton-tea; but solid food must not be attempted, until there is evidence that the mucous membrane is restored to a healthy state.

To remove the mercury out of the constitution the patient should take, thrice daily, two grains of the iodide of potassium in a wineglassful of decoction of sarsaparilla, of the strength of one ounce of the sarsaparilla to the pint of water, to be boiled slowly for fifteen minutes, and remain covered for twelve hours before it is strained for use. A tepid bath at 90° Fahr. every evening aids the action of

the iodide, and hastens the recovery. Warm clothing cannot be dispensed with, and chills must be guarded against.

THE CARBONATE OF LEAD, KNOWN AS WHITE LEAD.

This is a sedative metallic poison, which, when taken into the stomach, causes violent colicky pains, constant nausea with vomiting, costiveness, paralysis of the extremities, and, if the dose be large enough, death as a consequence.

Treatment.—If the poison be in the stomach, the patient should take two or three wineglassfuls of the whites of eggs, mixed with double the quantity of water; or, if eggs are not convenient, thin starch may be substituted; or arrowroot or flour, mixed with water. These being glutinous and tenacious, the poison combines with them in the stomach, and can be removed by vomiting, which ought to be provoked by tickling the throat with a feather or the finger. And if this does not succeed, thirty grains of ipecacuanha should be mixed in a cup of tepid water, half taken at first, and a tablespoonful of the remainder every ten minutes till it acts freely.

A plunge-bath at 98° Fahr. is of great service in relieving pain of bowels; and after it an ounce of castor oil should be given every eight hours till the bowels act; and if the oil fails to act in twenty-four hours, a quart of soap and warm water should be given as an enema, every six hours, till the bowels are relieved. The dose of oil should be repeated every morning for two or three days, till the bowels act naturally.

The food should be farinaceous, with milk; and to remove the poison from the system, three grains of the iodide of potassium should be taken in a wineglassful of water, after food, thrice a day; and this I have found to be the best antidote, and the speediest means of removing the poison out of the constitution.

The same treatment is applicable to all the lead poisons.

VERDIGRIS, THE ACETATE OF COPPER.

This is a corrosive metallic poison, which is often eaten by accident in preserved fruits, or in food prepared in copper vessels, without proper attention to cleanliness, in removing the rust off the copper before use.

The symptoms produced by it are a coppery taste in the mouth, increased flow of saliva, nausea, colic with griping pains, cramps in the limbs, and occasionally dysentery.

Treatment.—If the patient has taken the poisoned food lately, thirty grains of ipecacuanha powder should be mixed in a cup of tepid water, half taken at first, and a tablespoonful of the remainder every ten minutes till vomiting commences ; and this should be encouraged by frequent draughts of lukewarm water, with white of eggs or starch in it, to facilitate the removal of the poison from the stomach.

If the poison has passed into the bowels the symptoms soon become alarming, and the patient feels great prostration of strength, accompanied with a small, weak pulse, and generally with convulsions, which too often terminate in death.

To prevent a fatal catastrophe, a wineglassful of a mixture of white of egg and two parts of water, or of starch and water, to make it combine with the poison ; with thirty drops of sal volatile, or twelve drops of fluid ammonia, to rouse the vital energies, should be given every two hours, or oftener if prostration is extreme. And a mustard cataplasm should be applied over the stomach and bowels for twenty minutes, or longer if necessary to make the skin red ; and this should be repeated every six hours till the patient rallies.

Inflammation of the stomach and bowels is the common consequence of this poison ; and, if local pain indicates its presence, leeches should be applied over the seat of pain, six or more, in proportion to the strength of the patient ; but care must be taken to have the mustard well washed off the skin, and the surface smeared with sweet cream, to make the leeches sit. Fomentations should be applied after the leeches ; and, if one application does not remove the pain, they should be repeated next day.

As, after all poisons, the stomach is rendered incapable of digesting food, and only equal parts of milk, barley- or rice-water, in small quantities, every three hours, should be allowed ; nor should animal food, even in a fluid state, be given at first, and no solid animal food till health is restored.

SHELL FISH POISONOUS.

Mussels, shrimps, sprats, oysters, and different kinds of fish, if eaten in summer, have a poisonous effect on some persons, while many cannot eat this fish with impunity at any season. When fish disagree, they cause severe pain of stomach, nausea, giddiness, headache, great thirst, and prostration of strength, followed generally by

a rash on different parts of the body, accompanied by intolerable itching.

Treatment.—If the fish be in the stomach, thirty grains of ipecacuanha powder, or twenty grains of sulphate of zinc, mixed in a teacupful of water, half at once, and a tablespoonful of the remainder every ten minutes, should be given, as an emetic, to be encouraged by tickling the throat with a feather or the finger, and by draughts of tepid water.

If the time that has elapsed since the fish was eaten, together with other symptoms, indicates that the poison has passed into the bowels, an ounce of castor oil should be given, and its action hastened by an enema of soap and water thrown up into the bowel; and, to relieve the prostration of strength and spirits, the patient should take thirty drops of sal volatile, or twelve drops of fluid ammonia, in a wineglassful of toast-water, every hour or two hours, as required.

For the rash and itching, diluted fluid ammonia, hartshorn, should be applied with the finger or a camel's hair brush every eight or twelve hours, until they are cured.

The food should be farinaceous only, and the bowels should be moderated by a tablespoonful of castor oil as often as required.

POISONOUS MUSHROOMS.

Mushrooms of a dark brownish colour, that grow in low shady places, or on decayed trees, are poisonous; but such as have a bright red colour or a pink hue, and grow on elevated situations, are edible. The poisonous species, in addition to being dark in colour, when cut with silver blacken it.

The latter, when eaten, produce nearly the same symptoms as poisonous fish, and the treatment recommended for the effects of poisonous fish, suits equally for mushrooms.

PART V.

THE PROPER DOSE FOR ALL AGES.



THE doses of medicine ordered in the foregoing pages are suitable for adults of the male sex, unless when it is otherwise stated; but females do not require doses quite so large as men, and children less in proportion to age. In regulating the doses of medicine, the following rules should be observed:—

If the dose for an adult is thirty grains—

A child under 1 year	should get	$\frac{1}{12}$	or	$2\frac{1}{2}$	grains.
" " 2 years	"	$\frac{1}{6}$	"	4	"
" " 3 "	"	$\frac{1}{4}$	"	5	"
" " 4 "	"	$\frac{1}{3}$	"	8	"
" " 7 "	"	$\frac{1}{2}$	"	10	"
" " 14 "	"	$\frac{2}{3}$	"	15	"
" " 20 "	"	$\frac{3}{4}$	"	20	"
Above 20 up to 60	"	$\frac{3}{4}$	"	30	"
From 60 " 70	"	$\frac{5}{8}$	"	25	"
" 70 " 80	"	$\frac{2}{3}$	"	20	"
" 80 " 90	"	$\frac{1}{2}$	"	15	"
" 90 " 100	"	$\frac{1}{3}$	"	10	"

The scale should descend after 60, nearly in the same proportion as it advances before that period of life.

To this general rule there is an exception in the dose of opiates suitable for infants, who cannot bear one-twelfth of the dose of laudanum that is safe for an adult.

Twenty-five drops of laudanum is a moderate dose for any man and two drops of laudanum have been known to kill a child one year old. It is, therefore, hazardous to give opiates to children; and, if

given in any extreme case, the dose should be very small ; from half to one drop of laudanum to a child of one year.

The aged also bear opiates badly ; and, after sixty years, the dose should be guarded.

Owing to idiosyncrasy of constitution, opium, and some other medicines always disagree with some individuals ; and when this is ascertained, such medicines should be carefully avoided, and others substituted for them. Many who cannot bear opium are greatly benefited by hyoscyamus or conium ; and some who are prostrated by the smallest dose of tartar emetic, bear ipecacuanha very well.

The muriate, or acetate of morphia, is preferred by many practitioners ; but, in my practice, the extract of opium or its tincture, laudanum, agreed with a greater number than morphia did ; and, as the latter would be more likely to be given in overdose, it is not commendable as a household medicine.

Quinine, so useful as a tonic, does not suit everyone ; and, even in small doses, causes headache and feverishness to some patients, who are much benefited by an infusion of any bitter, as chiretta, quassia, or gentian.

The iodide of potassium, so very efficient in correcting acidity of the blood, and thereby relieving muscular rheumatism, disagrees with some patients, who are more benefited by small doses of Dover's powder, or the decoction of guaiacum. Hence the changes that occur in the public estimation of every remedy, making the popular character of any medicine as uncertain as the fashion of a lady's bonnet ; and, consequently, a very unsafe guide to direct us.

In addition to idiosyncrasy of constitution, habit has great influence in enabling individuals to bear doses that would be highly injurious, or perhaps fatal, to others. The opium eater can consume daily a quantity sufficient to poison half-a-dozen if not accustomed to this medicine ; and arsenic, if taken at first in small doses, and increased gradually, will finally be tolerated well, in considerable quantities.

Climate influences the action of medicines. Mercury is borne best in hot climates, as the free perspiration carries it out of the system, while opium is badly tolerated, because the heat increases the determination to the head ; and alcoholic stimulants follow the same rule, being more injurious in hot than in cold climates.

A LIST OF MEDICINES

REQUIRED WITH THE FAMILY MEDICAL GUIDE.

	lb.
Aloes, Socotrine, in powder, dose from one to ten grains	$\frac{1}{2}$
Alum, for lotions, gargles, or injections, twenty grains to pint of water	1
Ammonia, fluid, hartshorn, strong to be diluted with two waters, dose twelve drops	$\frac{1}{2}$
„ aromatic spirit of, sal volatile, dose twenty to thirty drops, in fluids	$\frac{1}{2}$
„ carbonate of, hartshorn, dose three to five grains, well diluted	$\frac{1}{4}$
„ the chloride of, sal ammoniac, dose five to ten grains, well diluted	$\frac{1}{4}$
Arsenic, Fowler's solution of, dose three drops, increased gradually to twelve	$\frac{1}{4}$
Belladonna, the extract of, used externally to alleviate pain	$\frac{1}{4}$
Bismuth, the tris-nitrate of, dose from three to ten grains, in mucilage	$\frac{1}{4}$
Borax, the biborate of soda, as a lotion, ten to twenty grains to ounce of water	$\frac{1}{4}$
Calomel, the sub-chloride of mercury, dose half a grain to five grains .	$\frac{1}{16}$
Camphor, as a stimulant and anodyne, dose from three to ten grains . .	$\frac{1}{4}$
Carbonate of iron, a tonic, dose from five to ten grains, in syrup . .	$\frac{1}{2}$
Castor oil, a mild purgative, dose from a teaspoonful to one ounce . .	1
Caustic, nitras argenti, externally	$\frac{1}{16}$
Chalk, precipitated, as an astringent, dose from ten to thirty grains . .	$\frac{1}{2}$
Cinnamon bark, infusion, one drachm to pint of boiling water . . .	$\frac{1}{4}$
Cod-liver oil, as an alterative, dose from a teaspoonful to a tablespoonful	1
Croton oil, stimulant and purgative, dose from one to two drops . . .	$\frac{1}{16}$
Dover's powder, the compound powder of ipecacuanha and of opium, dose from five to ten grains	$\frac{1}{8}$
Epsom salts, sulphate of magnesia, dose from one drachm to one ounce	2
Guaiac, the resin, a diaphoretic, dose from five to ten grains	$\frac{1}{4}$
Gum arabic, mucilage, one ounce to one and a half ounce of water . .	$\frac{1}{2}$
Hydrocyanic acid, Scheele's strength, dose from half a drop to two minims	$\frac{1}{12}$

	lb.
Hyoscyamus, the extract of, anodyne, dose from one to three grains . . .	$\frac{1}{12}$
Iodide of lead, for plasters externally	$\frac{1}{4}$
Iodide of potassium, hydriodate of potash, dose from one to five grains . .	$\frac{1}{2}$
Ipecacuanha, in powder, emetic, dose from twenty to thirty grains . . .	$\frac{1}{2}$
Lead, the acetate of, sugar of lead, astringent, dose from three to five grains	$\frac{1}{4}$
Laudanum, tincture of opium, dose from twenty to sixty drops . . .	1
Magnesia, calcined, for acidity, dose from ten to twenty grains . . .	$\frac{1}{2}$
Opium, the extract of, dose from one to three grains	$\frac{1}{2}$
Nitrat. Hydrarg. Oxidi. Rub., Red precipitate	$\frac{1}{12}$
Podophylline, extract of, dose one-sixth to half a grain	$\frac{1}{12}$
Potash, the bi-carbonate of, for acidity, dose from ten to thirty grains . .	$\frac{1}{4}$
„ the chlorate of, alterative, dose from five to twenty grains . . .	$\frac{1}{4}$
„ nitrate of, dose five to ten grains	$\frac{1}{4}$
„ the sulphate of, aperient, dose from one to two drachms . . .	$\frac{1}{4}$
„ the tartrate of, cream of tartar, dose ten to sixty grains . . .	$\frac{1}{4}$
Quinine, the sulphate of, tonic, dose half to five grains	$\frac{1}{12}$
Senna leaves, infusion, half an ounce to a pint of boiling water, dose half to two ounces	$\frac{1}{4}$
Soda, the bi-carbonate of, for acidity, dose from ten to thirty grains . .	$\frac{1}{4}$
Solution of the perchloride of iron, tonic, dose from ten to twenty drops	$\frac{1}{2}$
Sulphate of copper, bluestone, emetic, dose ten grains in a cupful of water	$\frac{1}{2}$
„ of zinc, emetic, dose twenty grains in a cupful of water . . .	$\frac{1}{4}$
Sulphur, sublimed, flour of sulphur, dose half to one drachm . . .	1
Sulphuric acid, diluted, refrigerant, dose twenty drops, well diluted . .	$\frac{1}{2}$
Tannic acid, astringent, dose five grains	$\frac{1}{2}$
Tartar emetic, the tartrate of antimony, dose from one to five grains . .	$\frac{1}{12}$
Tincture of catechu, astringent, dose from one to two drachms . . .	$\frac{1}{2}$
„ of squill, dose twenty to thirty drops	$\frac{1}{4}$
Turpentine, spirit or oil of, for worms, dose from half to one ounce . .	1
Wine of colchicum, in gout and rheumatism, dose from five to thirty drops	$\frac{1}{2}$
Together with a suitable medicine chest containing pestle and mortar, slab, and pill machine, scales and apothecary's weights.	

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